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WILDLIFE

JUNE 1975

The Florida Magazine for all Sportsmen

35 CENTS



Wallace
Huey

Florida Wildlife Scrapbook

IDENTIFYING "WHITE" HERONS

GREAT WHITE HERON

LARGE SIZE - 50" • ONCE
A DISTINCT SPECIES • NOW
CONSIDERED A WHITE PHASE
OF THE GREAT BLUE HERON
• INHABITS SOUTH FLORIDA
AND THE KEYS

FLESH-COLORED
BILL WITH
BLACK TIP

YOUNG BIRDS
LESS THAN
2 YEARS OLD
HAVE BLACK
BILLS - OLIVE
COLORED
LEGS

FOUND
MAINLY IN
THE KEYS •
RARE REST
OF STATE
• SIZE
29"

REDDISH EGRET
WHITE PHASE

LEGS
AND
FEET
BLuish

**SNOWY
EGRET**

BLACK
BILL

SIZE
22"

LEGS
- BLACK,
FEET
YELLOW

YOUNG SNOWYS HAVE
YELLOW STRIPE UP
BACK OF LEG

BLuish BILL
TIPPED WITH BLACK

SIZE
22"

**LITTLE
BLUE
HERON**
IMMATURE

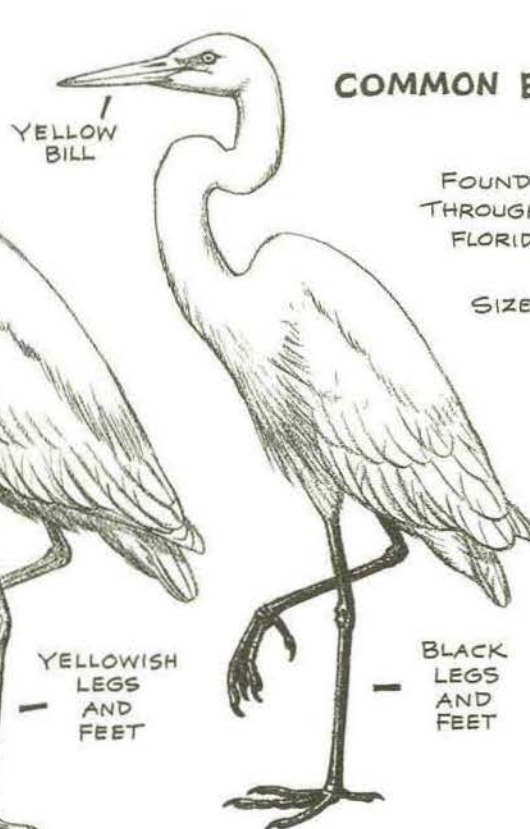
DARK GREENISH
LEGS AND FEET

SNOWY, LITTLE BLUE AND CATTLE
FOUND THROUGHOUT FLORIDA

COMMON EGRET

FOUND
THROUGHOUT
FLORIDA

SIZE 40"



YELLOW BILL
PUFFED
THROAT

**CATTLE
EGRET**

SIZE
20"

LEGS AND
FEET
- YELLOW,
PINKISH,
GREENISH
OR BLACKISH

RUSTY BUFF
COLOR ON HEAD,
BACK AND BREAST
DURING BREEDING
SEASON

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The Cover

Many readers will recognize the lovely green Luna Moth, and some may know the Royal Walnut Moth; but in all probability, few could match the adults with their respective larval, or caterpillar, forms. See page 13.

From A Painting By Wallace Hughes

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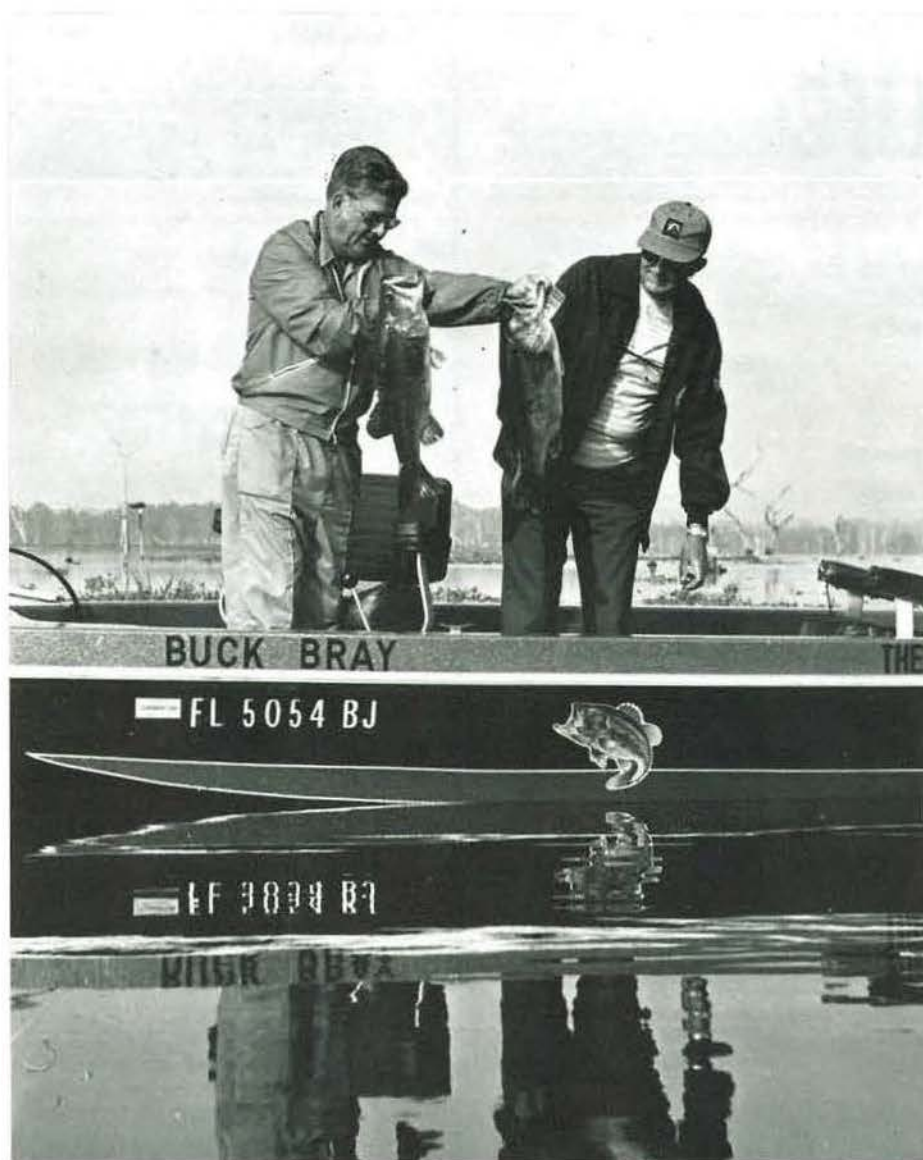
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JUNE 1975

it's no secret that big shiners
tempt braggin' size largemouths

"Hawg" Bass Heaven

By MAX HUNN



MY GOLDEN SHINER WAS CRUISING in delightfully dangerous territory. It was in danger of becoming a bass meal, which delighted me, for a golden river shiner is high on the menu of lunker largemouth black bass.

The cork bobbed along a short while then began jitterbugging. Suddenly it headed deep into the hyacinth bed that Buck Bray and I were fishing, in Lake Rousseau on the Withlacoochee River, in west central Florida. But I was uncertain whether the shiner had been hit or was just seeking more cover.

"Where's your cork?" queried Buck from the bow of his specially built 18-foot Ranger bass boat.

"Under the hyacinths," I replied, watching carefully for some indication of a strike. My line was still slack.

Gradually the slack disappeared. I let more line ease off my reel without any sign of a hit. When you're fishing really big shiners, baits up to a foot long, it's hard to tell what's happening unless a bucketmouth makes a violent strike. The shiners are so strong they can bounce a cork around deceptively. There'd been no violent strike.

"Are you going to set that hook today or next year?" remarked Buck.

"I will today if I can ever figure out what's happening," I answered, feeling my line, which still had normal tension.

"You've let your fish run way too long," Buck added. "Probably you haven't any bait now."

"O.K.," I said. "We'll find out." I took up the slack and attempted to set the hook. It was a sorry attempt, because of far too much line wound among the hyacinths.

I felt some resistance, like I'd snagged a bunch of hyacinths, but there was none of the violence usually associated with hooking a bronzeback. The reaction was so strange, I couldn't tell whether it was a fish or a foul. Nothing happened. The slight bend in my rod could have been just as easily a snag as a fish.

"What are you doin'?" queried Buck, sounding slightly exasperated at me. "Are you fishing or not?"

I just grinned, feeling a tug on the line just then. It wasn't a violent pull, but it was a pull. Snags don't do that. Suddenly, my rod took a sharp bend.

There was something bigger than my shiner on the end of the line. Now it was a question of whether I'd be able to land whatever it was. I applied more pressure, slowly regaining line. Then I stopped—for a good reason: The fish had taken my line around a huge stump.

Buck chuckled. "You get in the darndest situations. Going to try and land the stump, too?"

I continued a steady pressure, and inch by inch regained line. Still no violent action. Apparently I was steering my fish out of the hyacinths, and obligingly it didn't foul me on the stump. But when it reached clear water, wowie! All heck broke loose! Finally realizing it was hooked, the fish registered violent objections near the boat.

"You got a 'hawg'!" exclaimed Buck, dropping his rod and picking up the landing net. "You got a real hawg!"

The fish was displaying every sign of being an

angry largemouth. However, it had started bucking too late. In the clear water, I had no great problem controlling the bronzeback with my 20-pound test line. If the fight had been in the hyacinths, well, it might have been another story. The fishing gods were smiling, and soon Buck netted a 7½ pounder.

As he lifted the fish from the net, we saw why my sorry hook setting had succeeded. I'd let the fish run so long it had swallowed the shiner and the hook. The bass had actually hooked itself. But that didn't matter to me. A "hawg" bass is a "hawg" bass as far as I'm concerned, and on the Withlacoochee backwaters anything over 6 pounds qualifies.

Shortly I lost another in the same weight class. This one didn't swallow the bait, and in the fracas under the hyacinths, my hook came loose.

That was a day of lost bass. Before it was over, Buck had lost four good shiner runs, probably fish in the 6- to 7-pound class, and I had a lunker break a treble hook loose from a balsa plug. Apparently, the wire holding the treble had weakened. That bass made short work of it. However, Buck nailed a 3-pounder with a shiner, and a smaller fish with a plug. Action sometimes gets wild in this "hawg" hunters heaven.

There's a fascination about hunting big bass, and the Withlacoochee backwaters near Dunnellon is one of the top spots in the state. Ten pound fish

(Continued on next page)



Buck Bray and Will Williams, opposite page, display a pair of 7-lb. bronzebacks which were caught in Lake Rousseau on the Withlacoochee River. Some shiner fishermen use a treble hook, left, to increase their chances of success. Below, a fishing scene on the backwaters of the Withlacoochee River.

Photos By Kit and Max Hunn



(Continued from preceding page)

are common, and often you can hang (sometimes land) even heavier bass.

Undoubtedly, the dream of every bass fisherman coming to Florida (and most of the local residents, too) is to catch a lunker bass. Reams of publicity pour out annually about Florida's big fish, and the bucketmouths do get large. But the not-as-widely-publicized fact is you need live bait to catch big bass consistently. Experts say 75 to 80 percent of all "hawgs" are caught on shiners. You can hang and land lunkers with artificial lures, particularly the deadly plastic worm, but for day in and day out fishing efficiency, nothing beats a live shiner properly fished.

But although shiners are a natural bass food, don't think shiner fishing is simple. No sir. I learned by making several trips with Buck there's a lot more to this fishing than is apparent. It's been an education in a type of fishing that doesn't often make headlines. The size of the fish do, but not the method.

Buck's a dedicated big bass angler now, although he's done every type of fishing from ultralight in fresh water to deep sea trolling. Now he hunts big bass exclusively as a specialist in shiner fishing. A retired civilian employee of the U.S. Air Force, Buck and his wife moved to Citrus Springs to permit him to chase big bass full time. Fishing the Withlacoochee for several years before retirement, he learned the waters, and now prowls the stump-filled lake and river almost daily, always after "hawg" bass. He's been so successful that he's acquiring a reputation as a first rate live shiner guide. Of course, he also fishes with artificials.

Operating his custom-made bass boat equipped with stick steering, depth finder, electric trolling motor, bait live well and a live well for his catch, as well as padded chairs, he takes one or two anglers after the "hawgs." Buck delivers if you follow his advice and if the fish are in a cooperative mood. Bass being bass, there're days when they don't hit too well and days when they just can't resist, such as the May day Buck's party landed four bass weighing 4¾, 6, 10¼ and 11½ pounds. However, you normally average two fish weighing more than six pounds. You don't get as many fish using big shiners, but you do get the big ones. Buck's personal record is a 14½ pounder.

Although I'd fished a lot, I'd never seriously tried shiner fishing until meeting Buck. When he invited me to seek the "hawgs", I had reservations. I assumed, as do many experienced artificial anglers, that bait dunking for bass was easy. It isn't.

After launching at Dunnellon on our first trip, when I quickly learned the facts of shiner fishing, we zipped down the river at 30 miles an hour, pushed by the 85-horsepower Mercury outboard motor. His boat really moves!

Buck sometimes catches his own shiners, but

prefers to buy them to save time. He has a bait supplier who specializes in catching and selling wild golden shiners from the river.

Roaring down the twisting channel of the backwaters and across Lake Rousseau, I wondered if this route was always clear. The Lake and backwaters really never were cleared when the power dam was built half a century ago near Inglis. However, the snake channel is normally clear, Buck said. I took his word for it, naturally crossing my fingers.

Near the west end of the lake, we landed to get bait. When Buck returned and began dumping shiners into the bait well, I was inclined to ask where he'd been fishing. The shiners were 10 to 12 inches long. Obviously, we had to find big bass. Nothing else would tackle such monster bait.

Buck fishes a pattern on the Withlacoochee. He fishes only where he's caught big bass. We stopped at one of his favorite spots and began rigging. All his tackle is heavy. After having numerous lines broken, he's settled on 25- and 30-pound test on Ambassador reels with stiff baitcasting rods. Hooks range from 1/0 to 4/0, depending upon the size of the shiners, or 3/0 and 4/0 treble hooks. Anglers who really want to boat big fish often use treble hooks, putting the bait on one of the three barbs. Of course, there's a slight disadvantage. The treble hook collects more grass.

At the first stop, we only collected a big chain pickerel. Although we tried several other holes, our day's bag was one 5-pounder on this initial trip, but that's bass fishing. Bass are temperamental whether you're using live bait or artificials. However, it was a different story several weeks later, when I really learned what shiner fishing was all about.

Will Williams, an expert angler as well as owner-

The scene below is typical one on Lake Rousseau and the Withlacoochee backwaters west of Dunnellon. Buck Bray, above right, studies the author's 7½-lb. bass.





Photos By Kit and Max Hunn

operator of the Izaak Walton Lodge at Yankee-town, joined us for this foray. Will, like myself, is primarily interested in artificial lures. His chief joy is catching bass with plastic worms on the lower Withlacoochee. But he, too, was in for a lesson in a new type of fishing.

We'd no more than picked up a supply of shiners than it was apparent this was to be a different trip. Buck announced we'd troll. Trolling with shiners was new to both of us. We thought it would be easy fishing. We learned differently. Buck rigged for trolling using a 5/0 weedless hook, hooking the shiner through both lips. Then he eased us to a good fishing area and shifted from the 85-horse Merc to his electric trolling motor.

Buck advised that when trolling you sometimes feel only a slight resistance, and suggested striking immediately. However, if there's any indication the bass is moving off with the bait, the procedure is to let the bucketmouth have it for a 15-second count before setting the hook. His advice was sound, if confusing. I proved that shortly by pulling in a 2-pound bass I was unaware I'd hooked. I thought I was reeling in a clump of grass, and I was—but with a bass buried in the grass. Don't tell me this shiner fishing is simple!

Shortly thereafter, I landed another 2-pounder, only this time I knew what I was doing. Then Will and I both got into "let 'em run" situations, and although we dutifully counted to 15, failed to set the hooks. Will gave me a disgusted look as he re-baited. But he felt better soon, boating a 3-pounder that provided a good fight.

Buck, however, was dissatisfied with trolling—disappointed with the lack of lunkers. He suggested free lining shiners near a deep hole along the channel. This was another type of "hawg" hunting I'd never tried.

The secret of free lining is understanding the line signals. When you feel your shiner getting excited, indicating a bass in the area, you do nothing. A bit hard on jittery anglers. Then when the bass finally takes the shiner, you allow the bronzeback to move off without any drag resistance for the 15 count. Taking up slack, you "rare" back, hopefully setting the hook. Both Will and I yanked several times, but failed to connect.

Our frustration increased when Will had a bass in the 4-pound class chase his shiner under the boat, and then miss. We had several other runs, but either we tried to set the hook too quickly or we were just unlucky, making no solid connections. A few minutes later, Will had another run, had the fish on momentarily, and then the line went slack. Obviously, this shiner fishing was not as easy as it appeared.

I'd been fishing from the stern while Buck and Will were fishing from the starboard side. "Pitch your shiner over here," Will called, reeling in to check his bait. "Maybe you can connect."

I'd just put on a fresh shiner on my 30-pound test line, and quickly cast where Will suggested. Slowly the shiner sank from the weight of the hook and its own desire to get away from the surface. Bingo! My line started telegraphing. The shiner darted frantically. Suddenly, the darting ceased and my line started moving off steadily. Throwing my reel into free spool, I watched the line slowly run out. Mentally, I was counting. When I reached 10 instead of 15, I decided to strike. Taking up slack, I struck with a short, solid jerk. Contact!

Feeling the barb, the bass reacted violently, powering off against the heavy line and the tight drag. This definitely was not in the 2-pound class. Finally I felt my fish turn, and the slack line indicated it was coming towards me. Cranking rapidly, I retrieved line just in time to handle a violent jump. Now we knew the bass weighed at least 5 pounds.

Failing to shake the hook by jumping repeatedly, the bronzeback resorted to underwater warfare. The maneuvers failed, as my heavy tackle wore the fish down. Shortly, Will slipped the net under the biggest fish of the day, a 6-pounder—a baby Withlacoochee "hawg." Mine was the last bass of the day, too. The bronzebacks got lockjaw. But we were happy to have a "hawg" in the boat. Will and I agree there's more to fishing live shiners than appears on the surface. Now we're anxious to graduate from the baby "hawg" to the real lunker class—8 pounds or better. It'll probably take some doing, and we'll have to polish our technique, but the fish are there, and they *do* like shiners. ●

THE CHAIRMAN COMMENTS . . .

By O. M. PHIPPS, Chairman

THE CRACK OF DAWN ON OPENING DAY finds them there, gearing up for another hunting season. Drawn like a magnet to the woods on that first day, as though there was no tomorrow. If they don't make it out to hunt on opening day, then some of the magical qualities of the entire hunting season are lost.

But as Florida's population skyrockets and public hunting opportunities diminish, a conflict arises. Some of the most popular wildlife management areas are being overrun with hunters on the opening days of the season, so badly that at times it seems there are more hunters than there is wildlife in the woods. While these areas are being deluged, thousands of acres of prime hunting land under the management area public hunting concept are going almost unnoticed.

Hunters and wildlife are being hurt by the situation—there is too much stress on the wildlife population, and the quality of the hunting experience is suffering.

In an honest effort to resolve the conflict, the Commission has tried several approaches: requiring special permit stamps for some areas, limiting hunters, and even operating a lottery permit system on other management areas. All have paid off in limited dividends. However, too often sportsmen simply moved onto adjacent areas to hunt, causing more stress and more pressure on the neighboring tracts.

There was, and is, one ultimate answer to the problem: limiting the pressure (number of hunters) on wildlife management areas during the opening period of the hunting season. Embarking on such a program, though, was not taken frivolously.

During February and March, the idea of a quota permit system was brought up at the 19 public hearings the Commission held throughout the state. Generally, the majority of the sportsmen attending the meetings endorsed the program and its objectives.

Thus, the Commission adopted a recommended quota permit system to both control the hunting pressure on critical wildlife management areas and redirect the sportsman's attention to those areas which can absorb additional hunters without hurting the game populations. (See page 32.)

To say the Commission elected to bite the proverbial bullet by applying the system to all wildlife management areas would not be untrue or without reason. We recognized that many areas,

especially those in north Florida, do not really require a quota now. But we must look to the future.

We feel that it is a sound move to establish a quota for all areas simultaneously rather than allow these areas to simply absorb those hunters who missed out on the permit for their favorite area during the opening days. By adopting the quota system for every area now, the Commission and the wildlife managers can plan for future seasons.

The quota permit system is the first major change the Commission has made in public hunting for many years, and, as with anything new, some sportsmen are not going to like it. Other states have been using similar operations for a number of years, and they are based on sound wildlife management principles. The quota on each area is different and individually suited to the wildlife population, area size, and habitat quality. For example, a large area with limited wildlife and poor quality habitat may not have as large a quota as a smaller area with high population and good habitat.

How the permits were going to be issued created some lively discussion among members and staff of the Commission and, for that matter, among sportsmen. The first-come, first-served system finally adopted by the Commission will provide both an incentive and possible recognition to the concerned sportsman who plans his hunting well in advance.

In essence, the sportsman who procrastinates in submitting his permit application may find himself without a permit when the opening gun sounds November 8. Or he may find himself only able to obtain a permit for a remote wildlife management area he has never been to before.

The choice is left up to the sportsman. If he submits his application as soon as possible, chances are very good he will receive a permit for his favorite spot. But the chances of getting one of the permits for a choice spot diminishes with delay.

This season we don't really expect anyone to spend opening day without a place to hunt. It might not be his favorite, old standby site, but that in itself could open the doors to a whole new hunting world. We know some sportsmen will have to travel to new and different places, but we also feel that when they arrive, they will experience a quality hunting opportunity. And that's the name of the game.

We are trying to eliminate the bugs in the system before opening day. However, we also expect some to crop up as they generally do in any new venture. Whatever the problems may be, we will correct them and move forward in a dedicated effort to provide sportsmen with a place to enjoy the opening days of the hunting season and an ample wildlife surplus to be harvested the entire season. ●

Age Class

FISHING

a superabundance of undersized fish doesn't necessarily promise
that there will be better fishing in the coming year

NEW BOAT TAXING REGULATIONS that don't exempt motors of any size might change the market a little. The engines of only a fraction less than 10 horsepower have lost some of their appeal. I'd guess that light outboard fishing boats are going to be a bit larger to accommodate motors in the 15- to 25-horse class.

Except for those pulling travel trailers, I note that fishermen aren't quite as eager for cartop boats, possibly because new car models sometimes don't lend themselves quite so well to the necessary brackets. I do believe there are more small boats riding in the boxes of pickup trucks lately.

The inflated boats that take considerable horsepower, have keels, and are boat-shaped instead of raft-shaped, never took hold as strongly in Florida as I had expected when they first appeared on the scene. They're expensive, very safe, and fast enough for most inshore fishing. The disadvantages are obvious. Most of them have low-slung seats that aren't as handy for fishing as something that gets you higher above the water, and the size of motor that gives you high speed is a bit heavy for installation each time the boat is pumped up and launched.

Those inflatable jobs were popular in Europe before they had much of a play in America, and the first ones used here were overseas products. Now there are American-built inflatable outboard boats with rigid decks. They take up very little



By CHARLES WATERMAN

storage space in a car, camper or travel trailer. The inflating chores are handled pretty efficiently by foot pumps. It can turn into real work if you use the old-fashioned tire pump.

Something fairly new in the pump line is the kind that plugs into a cigar lighter and does the job with electricity. One of the best-known names in that field is Coleman's unit, small and light, but there are other makes. Years ago, beach buggy operators used their engines to re-inflate tires that had been softened for sand travel, but that involved removing a sparkplug from the buggy's power plant. Many modern cars have the sparkplugs so well hidden in a maze of gadgetry that it requires a surgical approach to find a plug, let alone extract it.

I'VE BEEN USING A HEAVY-DUTY aluminum johnboat that launches easily, goes pretty well with 10 horses, and is steady to fish from. When I got it I thought I'd use it as a cartopper on a Chevy Blazer part of the time. It was too heavy for that, so I haul it only on a trailer. I wish now I'd gotten it two feet longer, as the added weight would be very little, it would launch just as well, and I'd have a lot more room. Aluminum johnboats come in a variety of weights. I'm talking of a really heavy one.

Of course, the chief merit of the square-ender is that it has the maximum room for a minimum length. Sharp-bowed little skiffs split waves better but sacrifice a great deal of interior space. Sometimes the front 2 or 3 feet can be too narrow for tackle boxes, or even large shoes. These boats can be perfect for a single fisherman.

There's something new in light boats for inland waters: an aluminum high-bowed skiff somewhat resembling what's known generally as the skipjack design, a popular outboard rig for a long time in Florida. The skipjack has been made from plywood and is the standby of freshwater commercial fishermen. It has a very high bow, and those that take a lot of power have a vee that extends clear to the stern. You'll see them sizzling along with alarmingly big motors and at a lot of speed. The high bow keeps them dry, and they'll take a nasty chop without putting you in traction.

Now the aluminum version I've examined is the

(Continued on next page)

"Boat-shaped" inflatable boat works for those who have limited storage space. It is one of the safest of fishing craft.





B.A.S.S. tournament fishermen prepare for start at Welaka on the St. Johns River.

(Continued from preceding page)

Dixie Dory, produced by Alumawood Products, P.O. Box 963, Maitland, Florida 32751. I've seen a 16-footer with a 50-horse motor that should satisfy the most hurried lake or river fisherman. There is one hitch: there's no vee toward the stern and the builders have said that would be difficult to achieve in their overlap, welded aluminum construction. The high bow wouldn't be the best setup for an electric motor, although it could be rigged, with a little thought. There's some wood trim but it shouldn't require much maintenance.

Big skipjacks sometimes have a center console a la saltwater "fishing machine," but most of the smaller ones have the steering wheel mounted almost flush with the gunwales and with the operator sitting well toward the stern. That's the way they're rigging the Dixie Dorys I've seen.

Incidentally, I'm not too certain just who came up with the name "skipjack," which I've always used to describe those high-bowed plywood boats I've been pointing to. In other parts of the country they may not use the term. I believe (don't quote me) that it was originally a manufacturer's name and if I use it too loosely, I apologize.

FISHING FOR BASS OR PANFISH in temporarily flooded areas has been very tough for me. Even though the fish are there, they're likely to be widely scattered. As the waters begin to go down, however, the fish tend to concentrate, on the way back to the normal lake or river bed.

What was a very small and unimportant slough during low water can take on the characteristics of a feeder creek as the water subsides after a flood. The fish move into it gradually from the subsiding flood, and may stay there instead of getting into the lake or river proper.

BLACK BASS AND BLUEFIN TUNA don't see much of each other, but they have some things in common. This is about bass although it doesn't start that way.

Students of the tuna are worried about their fish's future, and the problem is a lack of certain age classes. Sport fishermen have been catching more and more busters in recent years, and some of them have been old enough to vote. There are also quite a few very small fish that don't appeal to sport fishermen—or commercial fishermen either, for that matter. It's the sizes in between that aren't showing up.

Now it may be that the big fish have been around all the time and it's just improved fishing methods that have been setting records, but it really doesn't make much difference. A lot of things could have happened since a 20-year-old bluefin was born. Fishing methods have come a long way since 1955.

A baby tuna has a lot of living to do before he can stretch anybody's fighting harness, and the hazards between 2 pounds and 400 pounds are enough to discourage any thinking fish. As long as there are big tuna there are likely to be some little tuna, but the race could die out from the

adult end. A tuna can't live forever. It's in between that the commercial fishermen and other predators seem to have been taking their toll.

Now go back to the bass business. A poor bass lake or river is likely to have a few giants. Catch one and there's a tendency to believe it's a good lake, for she may be fat and sassy. Then find a bunch of 7-inchers that come out and square off at your plug and somebody will say, "Things look great! We'll have plenty of good fishing in a couple of years."

One big bass can produce thousands of little ones, but when you stop to think that nature plans on only one or two of the hatch reaching maturity, the picture isn't quite so rosy. So some of the worst bass lakes have some of the biggest bass and a batch of little ones. The poor bass waters tend to be short on fish from 1 to 3 pounds. The ideal situation, obviously, would be a range of fish in all sizes.

There is no more challenging sport than hunting for lunkers only, but it is rare when there are enough of them to keep the average fisherman happy. If his search isn't encouraged by some in-between sizes, he begins to lose interest.

Poor fishing in freshwater lakes or rivers invariably brings oversimplified explanations. The balance is highly technical, and varies from one body of water to another.

For example, most of the best bass fishing is where there is cover for the fish to hide in, to find shade in, and to use as ambush for prey. Very small bass are in trouble if they have no place to hide. But if the growth gets too thick, the larger bass can't catch the things they want to eat. Bass like bluegills, for example, but given the right kind of cover, the bluegills can crowd the bass out, eating their eggs for one thing. When the bluegills get too thick, they stunt, and here's another situation where somebody is likely to say that fishing is going to be great in another year. It just isn't necessarily so.

What does a healthy fish look like? Well, a very large body with a smaller than usual head generally indicates there's a very good food supply and things are better than normal. A long, slender body with a large head is likely to indicate that the food supply has been poor—and if you follow the premise on through, chances are that the initial growth occurred in better times, after which the fish got skinny because the food supply failed.

All of this is complicated by the fact that a 2-pound bass needs more and larger items than a 6-ounce bass—and an 8-pound bass may be able to get fat where a 1-pound bass can't find anything of the right size to eat.

To use a really corny example, a newborn human baby couldn't make it on beefsteak and an adult might get skinny on a straight milk diet. Fish have different requirements at different stages of growth.

When the fish population shows big gaps in certain age classes, especially the classes most desirable to the fisherman, there's often a cry for new plantings. Here's a frequent point of friction between fishermen and fish manager. The manager says there are plenty of little fish—they just don't get big. Something in between wipes them out. What wipes them out?

Well, maybe he doesn't know, but he's sure more fingerlings aren't the answer.

See how complicated it is?

DOGS FURNISH ALL KINDS of fishing humor. I know a northern trout fisherman who owned a Labrador retriever that insisted on following him to and into the stream, even though she had to tread water part of the time. She was finally convinced that she should stay out of the area where the flies were being cast, but as far as I know she never stopped helping to retrieve the hooked fish. It didn't work out too well.

We used to have a Brittany who went into a real tantrum when a fish was hooked. He whined and yipped until it was landed, at which point he was hard to restrain. At first I thought he wanted to bite the fish, but it developed that his intention was simply to lick it a couple of swipes. I assume that was his version of counting coup, for once he had licked it he had little interest.

But he perked up again if you released a fish from a boat. If you slipped it into the water he'd come over to that section of the gunwale and, leaning over the side, would paw around in the water trying to find it.

FOR SOME 15 YEARS WE'VE USED a small beach umbrella for hot-weather fishing. Oh, we don't try to cast from beneath it or anything like that, but it's a wonderful thing for lunch time, when you can anchor out in the breeze away from shoreline insects. It helps too if you want to wait out a brief shower.

We used to lash it to the steering console of an ancient aluminum boat. Now we have a rig with sockets for seats of the bass boat type, and the umbrella handle was whittled to go down in there. A really big umbrella can be a lot of trouble in the wind.

MANY BASS BOATS HAVE WINDSHIELDS, most of them removable. I used to wear a grinder's mask to protect my face, and thought the whole world was waiting for such a brilliant idea. Although I preached it widely, nobody else seemed to take to it. It still works.

Running faster than 10 miles an hour in a rainstorm can make you feel like a martyr if nothing protects your countenance. Goggles and a big bandanna can do a pretty good job. If you're too proud to use my grinder's mask, do it that way. ●



Photo By Laurence Rossignol

Lake Butler Wildlife Management Area

Photo By Morrie Naggier

MOST FLORIDIANS ASSOCIATE THE NAME Lake Butler with a small town in the rural northeast portion of the state, but when sportsmen talk about the "Lake Butler Area", they are referring to the Lake Butler Wildlife Management Area. Presently comprising 151,191 acres in Baker, Union and Columbia Counties, "Area 23" lies 4 miles east of Lake City, 1 mile north of the town of Lake Butler, and 9 miles southwest of Macclenny. It is within an hour's drive of Jacksonville and Gainesville. With the conveniences associated with nearby towns, no wonder Lake Butler is one of the most popular blocks of "deer woods" in Northeast Florida. As an additional attraction, the Osceola National Forest, also a wildlife management area, lies adjacent to the north boundary of the area.

Lake Butler is no newcomer to the wildlife management area system. It was established in 1953 by cooperative agreement between the Game and Fresh Water Fish Commission and Owens-Illinois, Incorporated; Southern Resin and Chemical Company; ITT Rayonier; and Mr. William Knabb. Since its initial establishment, approximately 6,000 acres have been added. The area has been divided into portions for still hunting only and for hunting with dogs, and a portion is closed to all hunting. The still hunt area comprises ap-



proximately 5,000 acres and is separated from the 100,000-acre dog hunt portion by secondary highways. Approximately 10,000 acres are closed to hunting.

The habitat on Lake Butler is typical poorly drained pine-palmetto flatwoods with numerous cypress-gum swamps scattered throughout. Hardwood hammocks consisting mainly of oaks occur along Swift Creek and Olustee Creek, both tributaries of the Santa Fe River.

The area is open during the November-through-January general season and the spring turkey gobbler season in late March and early April. A special fox season is held, between July and October, in that portion of the area west of State Road 231. Firearms are not allowed in the area during the fox hunt.

Hunting pressure increased approximately 10% annually up until the 1970-71 season. Since that time, pressure has leveled off somewhat. Hunting pressure presently is considered to be moderately high.

The estimated game harvest during the fall and winter season for the past 5 years has remained good, averaging 170 deer per season.

Season	Deer	Turkey	Hogs
1970-71	235	Closed	Not Game
1971-72	126	Closed	Not Game
1972-73	172	Closed	Not Game
1973-74	161	Closed	18
1974-75	156	Closed	22

Primary game animals on the area are deer, turkey, feral hogs and gray squirrels. Lesser hunted game species include quail, rabbits, wood ducks

and fox squirrels. A small black bear population exists but is not large enough to withstand hunting. The estimated game populations are as follows:

Species	Estimated Population
Deer	1600
Turkeys	250
Hogs	300
Quail	Poor Population
Squirrel	Fair Population
Rabbits	High Population

The deer population is good but has stabilized over the past few years. Because of adequate native stock, deer restocking has not been attempted and therefore has reached its status on its own.

The turkey population has not fared as well as other game populations. Except for peak population periods in the early 1960's, turkeys have suffered some hard setbacks as the result of poor hatches coupled with intense fall hunting pressure in 1967 and 1968. Lake Butler's fall turkey season was closed for the 1969-70 general season, and has remained closed since that time. Except for the 1970 and 1971 seasons, spring gobbler hunting has since been allowed annually. Game managers feel the spring season is the most biologically sound of turkey hunting seasons, since only gobblers, which have already mated hens, are harvested. The turkey gobbler offers sporty recreation for the true turkey hunter. Since the close of fall turkey hunting, the population has experienced a notable increase.

Feral hogs were classified as legal game in 1973 by joint action of the Game and Fresh Water Fish Commission and the County Commissioners of
(Continued on next page)

Photo By Laurence Rossignol

Typical of the habitat within Lake Butler is this scene of section of pine-palmetto flatwoods (top left). White-tailed deer is one of the primary game species on management area. There's a 5,000-acre still hunt area which is separated from 100,000-acre dog hunting portion by secondary highways.

By LAURENCE ROSSIGNOL

This is No. 12 in a series of articles on Florida Wildlife Management Areas. Maps and current regulations covering individual areas are published annually by the Florida Game and Fresh Water Fish Commission, 620 S. Meridian Street, Tallahassee, Florida 32304.



(Continued from preceding page)

Baker, Columbia and Union counties. The hog population is fair, with hunting being the primary limiting factor. To insure a sustained harvest, hog hunting with dogs has been limited to the first 9 days of the fall season throughout the area. Thereafter, hogs have been hunted only in the still hunt portion.

Though not an especially favorite area for squirrel or quail hunting, some hunters find a few choice spots. Gray squirrel hunting is good along the creek hammocks associated with Olustee and Swift creeks, while quail hunting potential is limited to 1- to 2-year-old clear-cut areas.

Rabbits are an underharvested game species on Lake Butler as well as other management areas in the state. The population of cottontails is good due to the young stages of forest succession in much of the area. Census counts around 2-to-3-year old pine stands have shown that these areas are most productive for rabbits. Also, long windrows that are created during pine site preparation provide ideal conditions for cottontails, especially when overgrown with blackberry vines and other weedy growth.

Public camping is not allowed on the area, but hunters will find an improved campsite at nearby Ocean Pond in the Osceola National Forest. This campsite is provided by the U. S. Forest Service under the Land and Water Conservation Act. A nominal fee is charged at Ocean Pond, but several unimproved campsites are available free of charge elsewhere in the National Forest.

Besides hunting, the Lake Butler area offers some pretty good fishing. Three large lakes—Lake Butler, Palestine and Dowling—are favorite fishing spots. These lakes are moderately productive for fish. Bass and bream populations are fair, while speckled perch populations are good. Fishing for redfin pike and warmouth is very good along small creeks draining the swamps, and in Swift and Olustee creeks. The most popular method for fishing the creeks is to walk along the banks and drop a line baited with worms into deeper pools near culverts or overflow areas. Redfin pike can be enticed into biting by zigging a worm or piece of colored flannel cloth across the top of the water.

Though the primary land-use practice by the owners on the area is management of slash pine for pulpwood production, habitat manipulation efforts are specifically for game. Chopping, disking and controlled burning, practices associated with timber management, are generally beneficial to deer and turkeys in that they create varying stages of forest vegetation succession.

Twenty-two game food plots of 1 to 2 acres each are maintained in fall, winter and summer forage and grain crops for deer and turkeys. Fall and winter plantings consist of an oat, wheat and rye mixture. In late fall, rye grass is added to the plots.



Photo By Laurence Rossignol

There's fairly good fishing available on the Lake Butler area. Above is portion of Lake Palestine, one of anglers' favorites.

During the late spring, browntop millet and combine peas are planted. Chufas are planted in summer, for fall turkey feed. All plots receive heavy use from both deer and turkey. The Commission is cooperating with Owens-Illinois to plant portions of clear cut areas to perennial grasses for turkeys, in order to maintain a permanent open understory under some timber stands.

Wood duck nesting boxes are part of the landscape around lakes Palestine and Dowling. The boxes supplement a lack of nesting sites for woodies and are constructed from either cypress lumber or hollowed cabbage palm logs. The wood ducks show no particular preference; they utilize both types.

Metal turkey feeders constructed from 5-gallon garbage cans are used to provide supplemental feed. These feeders are usually placed around food plots and are maintained during the early spring and summer with whole shelled corn. Observation of turkeys using the feeders helps resident game managers determine the numbers of turkeys in certain sections of the area, and establish year-to-year trends as to the status of the populations.

The Commission and landowners are continually searching for ways to improve these lands for sportsmen, but without cooperation from the public these efforts are useless. Sportsmen are urged to respect public hunt areas and to obey all wildlife and land-use regulations. The Lake Butler WMA is one of 42 areas which comprise some 5 million acres of public hunting lands in Florida, of which 1.7 million acres are made available by private landowners. These areas are managed to provide an enjoyable outdoor experience to the sportsmen. We all want to keep public hunting a part of Florida outdoor recreation. ●

Moth Magic

By CAROLINE O'BRYAN

IT'S EASY TO SEE WHY the Luna Moth has been referred to as the most beautiful insect in America. A vision of loveliness in pale green, with maroon-edged forewings, transparent eyespots and long trailers, the luna (*Actias luna*), of the family Saturniidae, is described as the only northern moth with a tropical appearance, since many species of more humid regions are also endowed with similar swallowtails. It is, in fact, tropical in origin, and is found from Canada to Florida, west to the Great Plains, and south into Mexico, but is most prevalent in the southernmost states.

Although it covers a lot of territory, the luna isn't as familiar an insect as others of this continent, as it is a nocturnal one that floats through the air on wings that some say resemble crescents of a waxing or waning moon—which may account for it being named after the Roman goddess Luna. In spite of its graceful appearance, its long trailers do not allow for lithe wing movement while in flight.

Because of its extensive range, there is a great variation in the food plants upon which the female deposits her bun-shaped eggs. The host may be either the persimmon, hickory, walnut, or sweetgum. She lays the eggs either singly or in clusters, (sometimes as many as 200 at a time) and dies soon afterward. The eggs take about three weeks to hatch, at which time the larvae, which are a translucent pale green, emerge and begin to eat voraciously. During the first 48 hours of their lives, the larvae are said to consume 86,000 times their own weight in food, and they eat continually, stopping only for one of their numerous moults. It is interesting to note that the adult luna does not feed in its lifetime, due to undeveloped mouthparts; only the larva eats.

About 7 weeks after hatching, the larva spins a paper-thin cocoon around its body, after which the caterpillar shrinks appreciably in size, the skin splits again, and the result is a pupa—smooth, brown, and resembling a .38 caliber bullet.

The cocoon, which is usually spun on the ground among leaves and grass, is sealed without a valve, and the pupa remains loose inside. It is sheltered through the winter, and when spring arrives, the fairylike luna moth emerges, thus completing the transformation from a somewhat repulsive larva to one of the world's loveliest insects.

The female can attract males from many miles away. The male moth picks up her scent through

his sensitive antennae, which are broad and feathery and larger than those of the female. After mating, the female lays her eggs, dies, and the life cycle of this ethereal creature begins anew.

The Hickory Horned Devil, our largest caterpillar, with a length of 4 to 5 inches, is the larva of the Royal Walnut Moth (*Citheronia regalis*), of the family Citheroniidae. It is a medium-to-large, stout-bodied moth whose female may attain a wingspan of 5 or 6 inches. The moth resembles the Saturniidae, but the wings, which are an indescribable combination of red, orange and brown, with yellow spots, are more slender and pointed and do not have the translucent areas. Also, the antennae of the males are only feathery for about half of their length.

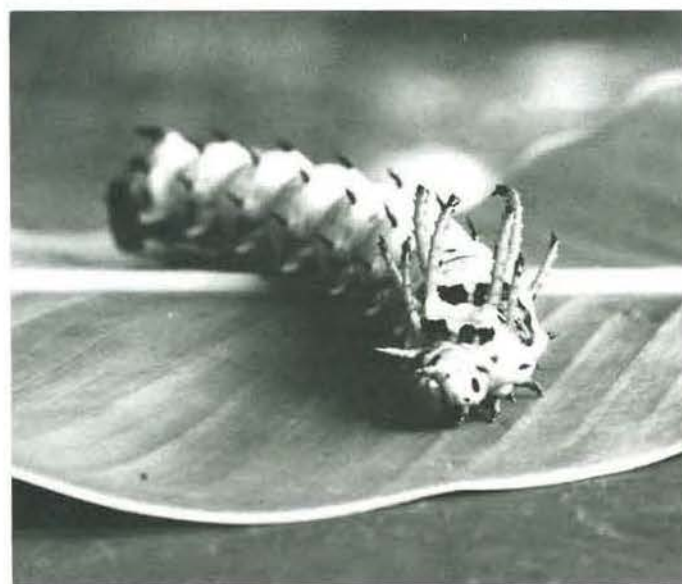
Like the luna moth, the mouthparts of the royal walnut moth are underdeveloped and it does not feed at all as an adult. It also has a quite awkward flight, due to its rather large body and relatively small wings.

Its range is the eastern United States, and its larva, the aforementioned hickory horned devil, is the only one of its kind known to fight with natural enemies. Its large size and other awesome physical characteristics, coupled with a naturally feisty attitude, would incline one to approach it with caution. Looking somewhat like a small dragon, with long, curving, spiky "horns," and covered with shorter spines, this caterpillar is one of a species which *will* sting, although it is generally considered harmless. Nevertheless, if it is handled, it should be done with great care.

The preferred food of this larva is walnut, although hickory, pecan and butternut leaves are acceptable. The larva does not spin a cocoon, but rather burrows underground, below freezing level, where it remains through the winter and emerges with the arrival of spring as the handsome royal walnut moth. ●

HICKORY HORNED DEVIL

Photo By Gene Smith



fact and myth can
be hard to separate where
these misunderstood
creatures are concerned

Snakes- Friends and Foes



Photo By Wallace Hughes

JIM STEVENSON, A YOUNG HERPETOLOGIST in Tallahassee, and son of Dr. Henry B. Stevenson, an eminent ornithologist at Florida State University, is one of the comparatively few people around who teach that most snakes are harmless, useful and even friendly, and not the dangerous, loathsome creatures that caused man's ejection from the Garden of Eden.

He teaches classes for children and adults in FSU's Continuing Education Program, serves as guest lecturer on the subject in the University's biology labs, and frequently collects specimens for research and museums. His personal research, which he intends to publish, is on shed skins of snakes.

In his classes, the children, especially, respond enthusiastically as they learn about the evolution of the snake, its physical structure, its contribution to man, if man but realized it, its enemies, how to

recognize the various species in Florida, and what to do if bitten by a poisonous snake.

Stevenson takes students on field trips to marsh areas at St. Marks National Wildlife Refuge, to the Wakulla River, around Lake Jackson, and to Alligator Point to see snakes in their natural surroundings. They learn how to catch and care for snakes if they wish to keep them as pets.

"The result has been," says 22-year old Stevenson, "that my students are not afraid of snakes, but consider the harmless ones as usually friendly to man."

In order to achieve so positive an attitude, one must become acquainted with the creatures and be able to distinguish fact from myth. Some of the most common myths are:

1. All snakes are dangerous and should be killed on sight. "Nonsense," says Stevenson. "Most snakes are harmless, and useful for specific tasks. They

hunt rats and mice on farms and in other infested areas, and are better at it than cats. Poisonous snakes, of course, should be avoided or killed, but in Florida there are only six such species."

2. Snakes are wet, slimy creatures. "Wrong. A snake's skin is dry and cool to the touch. It is a cold-blooded animal."

3. Snakes hate man and will attempt to strike if approached. "Not so. Snakes are usually shy of man, and will move away quickly. But if cornered, even some of the harmless ones will hiss, others may bite, and still others may let you handle them without any fear whatsoever if you do not frighten them, and if you pick them up gently. Ground snakes have no apparent fear of man; they don't care who handles them."

According to authorities on reptiles, snakes and their closest relatives, the lizards, are descended from a fishlike creature that crawled out of the sea onto land about 350 million years ago. It was the first vertebrate to breathe air and survive on land.

After many eons this adventurous creature's descendants became known as amphibians—animals that can live on land and in the water, such as crabs, frogs, newts and salamanders.

Fossil records indicate that snakes and lizards evolved from their amphibian ancestors, and as time went on—lots of time—a hard-shelled egg developed, from which snakes and other reptiles were hatched, becoming the first vertebrates to be born on dry land.

Snakes have played a part in many civilizations. John Stidworthy, in his *SNAKES OF THE WORLD*, writes that in Africa, India, South America, and Europe, in times past, snakes have been considered sacred. The ancient Greeks had snake deities, and

in ancient Egypt and among the Australian aborigines, snakes or snake gods were supposed to have the power to bring rain. Even in present time, the Hopi Indians of Arizona perform a snake dance originally designed to bring rain.

Snakes have been widely used as symbols, good luck charms, or as magical medicine. Stidworthy says, "In medieval times practically every organ of a snake was considered good for one ailment or another; even today some people believe that snake oil or fat used as a liniment will produce healing suppleness."

Although the snake's shape is unlike that of any other creature, its internal organs are similar to those of humans—only stretched out; missing is the urinary bladder.

Besides having internal organs adjusted to its shape, the snake's skeleton is also adapted for its survival. Its jaw is attached to the skull with such elastic ligaments that its mouth can stretch wide enough to swallow an animal two or three times the diameter of its head. Its body also widens to accommodate the meal.

The snake is carnivorous, and its needlelike teeth, curved inward, are designed for grabbing its prey. It swallows what it kills whole—mice, rats, frogs, lizards, and other small animals of field, forest and stream. While the snake has food blocking its mouth and throat, special muscles carry the windpipe forward so it can still breathe.

According to Stevenson, a snake will yawn three or four times after eating, causing the bones of the jaw to slip back into place.

The snake's backbone is so constructed that its movement can be flexible and its many vertebrae—

(Continued on next page)

Photo By Leonard Lee Rue III



By SABINE EHLERS

Jim Stevenson, far left, displays a prime specimen, a mud snake whose shiny body with bright, prominent markings is evidence that it has recently shed its skin. The species has a harmless spiny-tipped tail. A garter snake, left, is one of the common, useful and friendly species. The snake is a carnivore with inward curving teeth that hold prey securely. The small creatures—rats, mice, frogs, lizards and the like—that make up the food of snakes are swallowed whole.

(Continued from preceding page)

varying from 180 to 400, depending on the species—can stand the stress of its different methods of locomotion.

The most common movement is wriggling the body, beginning with the head then moving from side to side to the tail, causing the body to be thrown into a series of horizontal waves or undulations.

Another method is looping the body, keeping each loop relative to the ground and stationary as the tail moves along the track left by the head.

Still another method of locomotion is sidewinding, used by desert vipers and rattlesnakes. Here, the loop of the front end is thrown forward as the snake pushes downward horizontally.

Rectilinear creeping, usually seen in snakes with very thick bodies, is also used. The body is kept in almost a straight line as the snake moves forward.

Most snakes can use whatever method best suits the terrain or the speed at which they need to go.

A snake has reasonably good eyesight at short distances. Instead of eyelids, a transparent covering protects the eyes. It has no outside ear openings,

so is unable to hear sounds in the air but can feel vibrations in the ground through the bones in its head. A special organ of smell to help it find its prey consists of two small openings in the roof of its mouth. It is called Jacobson's organ, after the man who developed the research. These spaces, lined with nerve endings, are sensitive to odors. As the snake flicks its forked tongue in and out, it picks up particles from the air and ground, and deposits them into the organ by placing one fork into each space.

Most snakes shed their skins four to six times a year, but young snakes and certain species may shed more often. From their skins one can tell the length and width and often the species, as the sloughed-off skin usually shows the large belly scales, the pattern on the back, the eye covering, and even the facial pits. Only the color, which stays in the dermis, is missing. Snakes are at their most colorful immediately after shedding.

Most snakes are *oviparous*. They lay eggs, and the embryos feed on the yolk and take care of themselves after hatching. In some species, however, the mother retains the eggs in her oviduct until the last stage of development, and the eggs

Living up to its name, red rat snake swallows one of the troublesome rodents. Jaw of snake is attached to skull with such elastic ligaments that its mouth can stretch wide enough to swallow animals two or three times the diameter of its head. While the snake has food blocking its mouth and throat, special muscles carry the windpipe forward so it's still able to breathe. The green water snake, below, moves with undulating type of motion which is a common mode of locomotion of many species.



Photos By Gene Smith



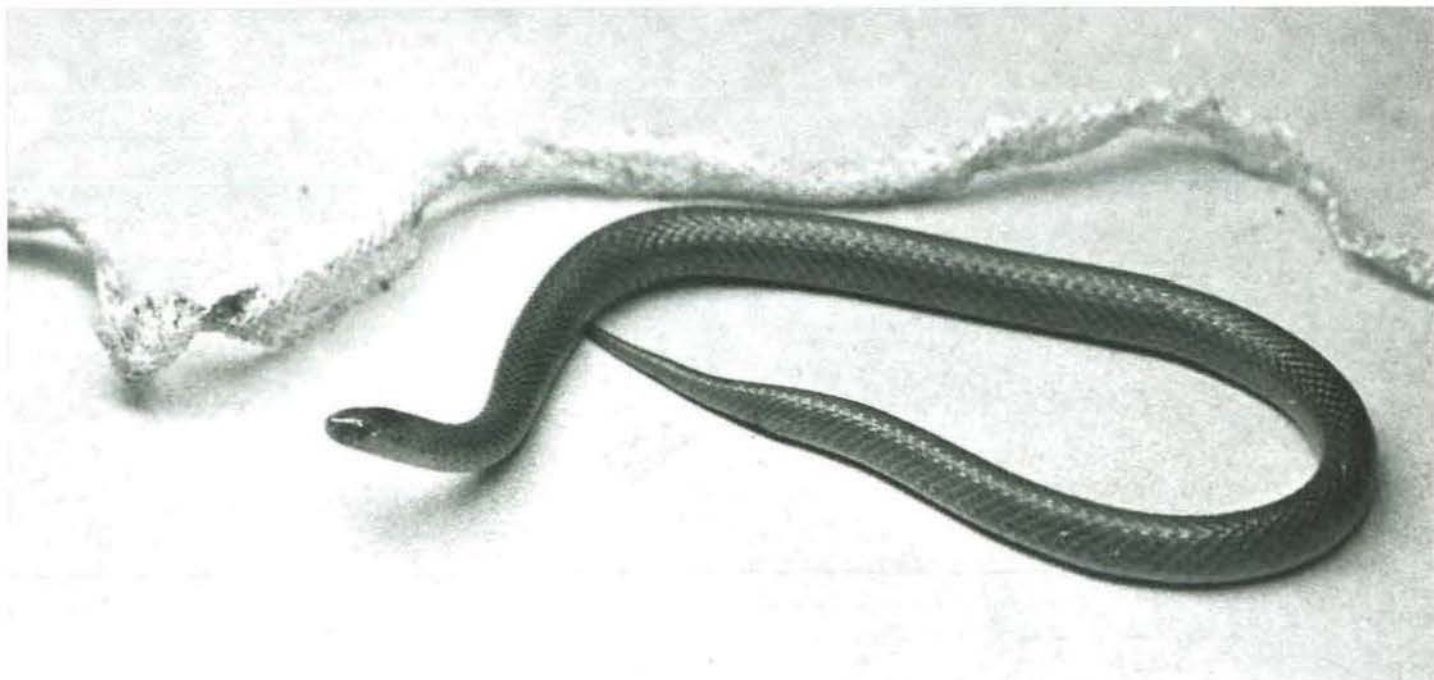


Photo By Wallace Hughes

Ground or earth snake, above, with shed skin. Most snakes shed four or five times a year, some even more often. The diamondback rattler being "milked" of venom shows hollow fangs which act like hypodermic needles to inject venom.



Photo By Carson Baldwin, Jr.

hatch as they are laid. These species are termed *ovoviviparous*. The embryos also get their nourishment from the yolk, not from the mother.

Florida has 44 species of snakes. Only six are poisonous. It is well to remember that the bite of the nonpoisonous serpents, though not fatal, can be painful. Washing the area thoroughly with soap and water is recommended. The pain will disappear shortly.

Florida's most common nonpoisonous snakes are the rat snakes, of the genus *Elaphe*; the black racers, *Coluber*; and the water snakes, *Natrix*.

These and the other less common species are described at length in Roger Conant's *A FIELD GUIDE TO REPTILES AND AMPHIBIANS*. It is wise to become familiar with their markings and behavior before going hiking or camping in the woods and hills.

As for the poisonous species, it may be comforting to know that in the United States, only 1 percent of all treated and untreated bites result in fatalities, but 15 percent of all untreated bites result in death. Conant says, "... Your chances of getting killed by a snake are considerably less than being struck by lightning. Most bites result from careless handling of venomous snakes by amateurs or by failure to follow proper precautions in the field."

He suggests wearing protective clothing when hiking in areas where poisonous snakes live, wearing knee-high leather boots or high leather shoes for hiking and climbing, and watching one's hands when climbing, being careful not to put them under rock ledges. Tools should be used for turning over logs or rocks, and having a companion close at hand in the event that help is needed is sound practice.

Conant describes snake venom as being "a liquid, usually yellowish, although it can be white or even colorless. It is secreted by glands on either side of the head and is injected into the victim through hollow fangs."

Snakes secrete two kinds of venom, varying with the species. Rattlesnakes, copperheads and cottonmouths, all pit vipers, secrete a hematoxin, (Continued on next page)

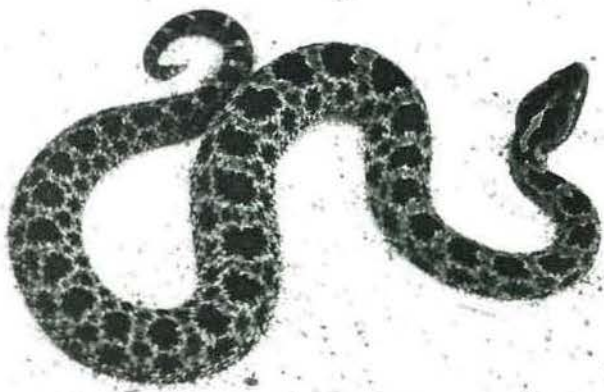


Photo By Gene Smith

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which attacks the blood cells, breaking down the cells of the blood vessel linings and causing the blood to clot internally. Although a dangerous, painful bite causing much swelling and discoloration and possible internal bleeding, this venom is not as dangerous as that of the coral snake or cobra, members of the family Elapidae, whose venom is a neurotoxin, that is, it attacks the nervous system. These nerve poisons may cause a feeling of weakness and paralysis, extending to the muscles of the heart and lungs, causing cardiac failure and suffocation. The original bite is practically painless, and little pain is felt as the paralysis progresses.

In case one is bitten by any poisonous serpent, it is vital to keep calm and go to a doctor or a hospital immediately. If the species of the snake is unfamiliar, it should be killed and taken along for identification. The patient should keep the bitten limb hanging down to minimize the blood flow. A tourniquet applied rather loosely above the bite would serve to impede the flow of blood to the veins but not to the arteries. The tourniquet should be released every few minutes. The object of this kind of first aid is to slow down the spread of venom until help can be obtained, and the proper antivenin injection given.

Stevenson points out that the two common poisonous species of rattlers in Florida are the Eastern Diamondback Rattlesnake, *Crotalus adamanteus*, and the Pygmy Rattlesnake, *Sistrurus miliarius barbouri*. A third species, seldom seen, is the Canebrake Rattler, *Crotalus horridus atricaudatus*.

The diamondback grows to be 6 feet long and 8 to 9 inches in diameter. Its brown to yellowish-gray color and slate-colored diamonds serve to identify this dangerous snake. Stevenson says, "Finding one's self in close proximity to the large coil and steady, buzzlike rattle can prove to be an unsettling experience."

The smaller pygmy rattlesnake, or ground rattler, as it's usually called, is a light gray with reddish brown or black splotches unevenly arranged down



Photo By Morrie Naggiar

the back. This species is normally between 1 and 2 feet long, but makes up for its size by its fiery temper and burning venom.

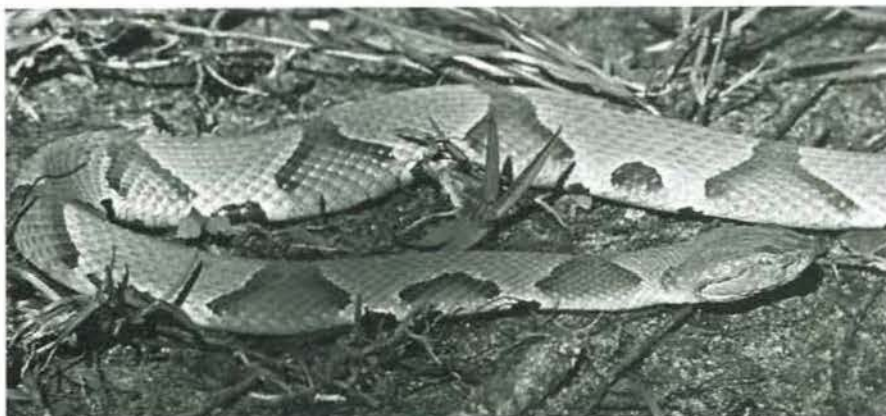
Both species prefer a semi-arid to very dry habitat, but will occasionally wander to lakes and swamps for water and small rodents, which are the mainstay of their diets.

Only occasionally seen and only in north and north-central Florida, is the canebrake rattler, which prefers swampy habitat, in contrast to its two counterparts. This rattler may be yellow, gold or brown, with large brown squares that superficially resemble the Brown Water Snake, *Natrix taxispilota*. However, this harmless water snake lacks the dark line in the middle of its back that the canebrake rattler has.

Most numerous is the Cottonmouth, *Ancistrodon piscivorus*, another swamp dweller, often found where large trees and dense undergrowth thrive. This stout-bodied serpent is unmistakable upon close observation. Its white mouth—responsible for its name—the longitudinal line across the face; the broad, flat head, and its habit of vibrating its tail, will usually alert the passerby to the presence of this poisonous snake. The yellow tail tip on young snakes, and the dark, broad band through the eye, plus the tendency to stand its ground, assures one that this, indeed, is the cottonmouth. Though largely nocturnal, this cunning reptile may prowl during the day.

Its close relative, the Southern Copperhead, *Ancistrodon contortrix*, has been recorded rarely near the Florida-Georgia line. The golden-brown coloration, hourglass bands, and light yellowish head identify this snake of the high country.

Florida's two common rattlesnakes, the pygmy, far left, and the diamondback, near left, are found usually in dry habitats. The rare cane-brake rattler (not pictured) prefers a swampy home. The copperhead, at right, lives in hills along Florida-Georgia border. Cottonmouth, below, lives in aquatic habitats and is our most numerous poisonous snake. The shy coral snake, shown right below, is beautiful but dangerous.



Photos By Wallace Hughes



Photo By Jim Reed

Though not as poisonous as its relatives, the copperhead should inspire respect and be left alone.

Florida's last poisonous snake is the only one in North America with neurotoxic venom, the Coral Snake, *Micrurus fulvius*. It usually lives in semi-arid to very dry areas like those preferred by the common rattlesnakes, but normally stays underground except at night or early morning. Its black nose and yellow, red and black rings should be unmistakable, but only if the red and yellow rings are touching, otherwise it does resemble other non-poisonous serpents. If the red and yellow rings do touch, leave the snake alone! Stevenson says, "The fatality rate in the U.S. for coral snakebite victims is about 80 percent, but this is expected to drop as better antiserums are developed." He adds, "Some 70 percent of all snakebites in the U.S. result after the serpent has been spotted. Instead of leaving the snake alone, the person tries to kill or capture it."

Stevenson's most frightening experience with a snake was the time a coral snake bit him. He recounts the tale:

"I was driving southeast of Tallahassee late one night when I saw a snake in the road. It looked like a harmless mud snake to me, and I stopped to have a better look at it. As I put my hand down to pick it up, it bit my finger, and to my dismay,

I saw it was a coral snake and knew I was in trouble.

"I drove to the hospital as fast as my car would go, being especially concerned because I was allergic to the antiserum.

"I was 18 at the time, my folks were touring Florida (I knew not where at that moment), and I must say I was a bit anxious.

"The doctor on duty put me into intensive care and when I told him the details, asked if he should call a minister. He explained my chances for survival weren't good.

"I refused to call my minister so late at night. I felt that I could talk to God myself. My life was in his hands. I began to pray quietly and to repeat some of my favorite Bible verses. I could feel the paralysis creeping up my hand and wrist as I began repeating the verse in Philippians 4:7: "And the peace of God, which passeth all understanding, shall keep your hearts and minds . . ." It settled me down, and I drifted off to sleep.

"The next morning, I awoke! I was alive! The doctor and nurses were happily surprised; they sensed the miracle that the venom had stopped acting just before reaching the spinal cord.

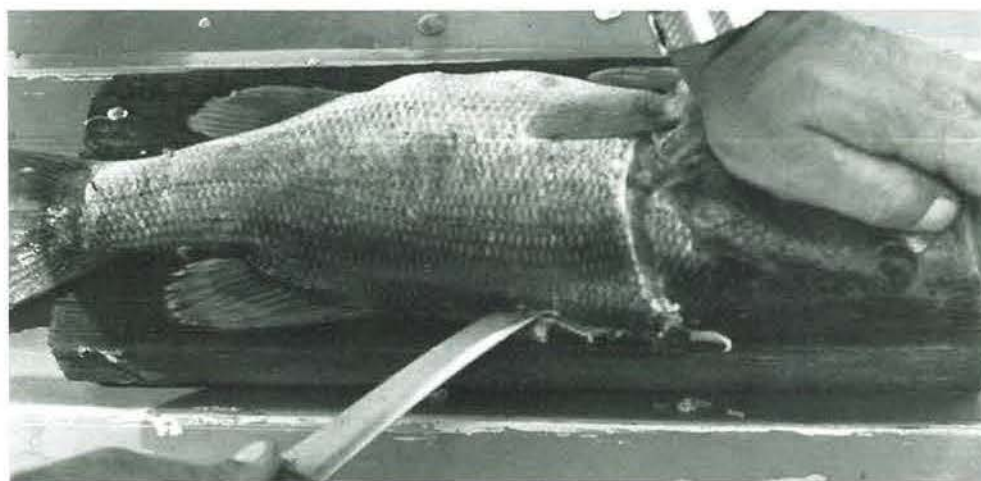
"To say that I was happy and thankful to God is the understatement of all time." ●

here's the secret to
some fine eating

How To Skin A Bass



1



2

FOR YEARS I ATE BASS at other people's homes that were better than those we cooked in our own home. The secret of their success was that they skinned their fish. Apparently, the skin of a bass is like the wrapper of a cigar; it accounts for 30 to 40 percent of the flavor.

For frying—the way most Floridians cook fish under 3 or 4 pounds—bass taste better without the skins. Two skinless filets from each bass are not only more tasty; they save you the trouble of scaling and gutting.

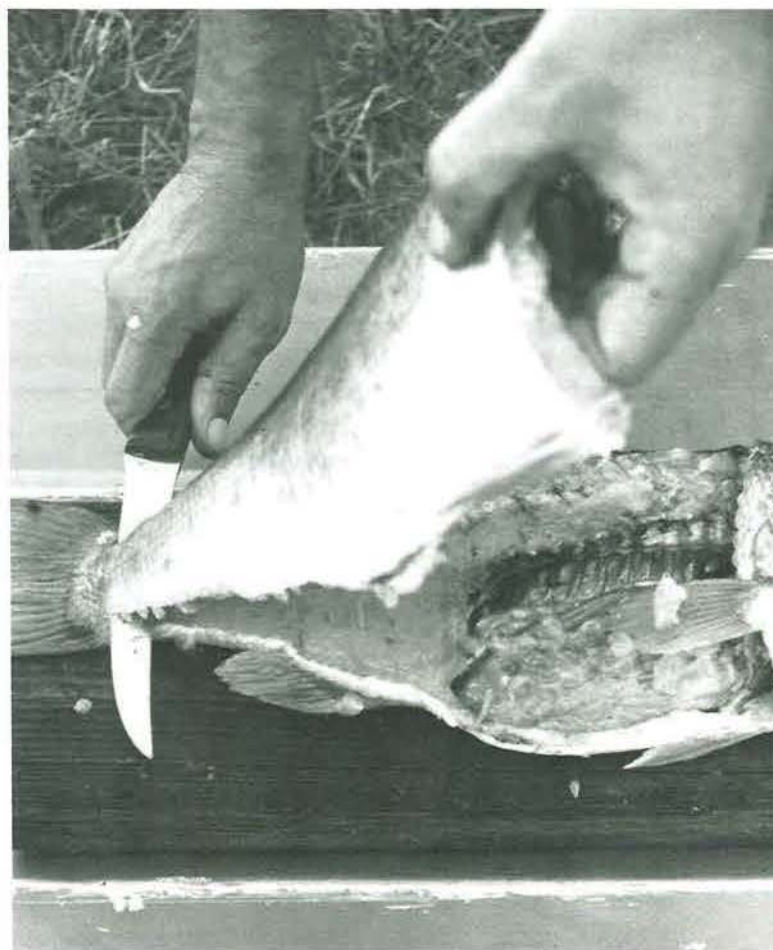
Of course, the secret for cleaning any fish is to start with a sharp knife. For filleting, the knife should not be rigid but have a blade with flex so that it can be worked along the backbone with a minimum loss of meat.

Photo 1 shows how you make the first cut, with the bass on a wooden chopping board. The cut is made all the way across the fish but without going through the backbone.

As the process is a little tricky for the beginner, photo 2 shows the way to commence cutting along the dorsal fin to get the filet started. You make the same kind of cut from the belly, wiggling the knife along the backbone until you have enough flesh to grasp, as shown in photo 3.

Once you get a good hold on the side, you can quickly work the knife down the backbone with

3

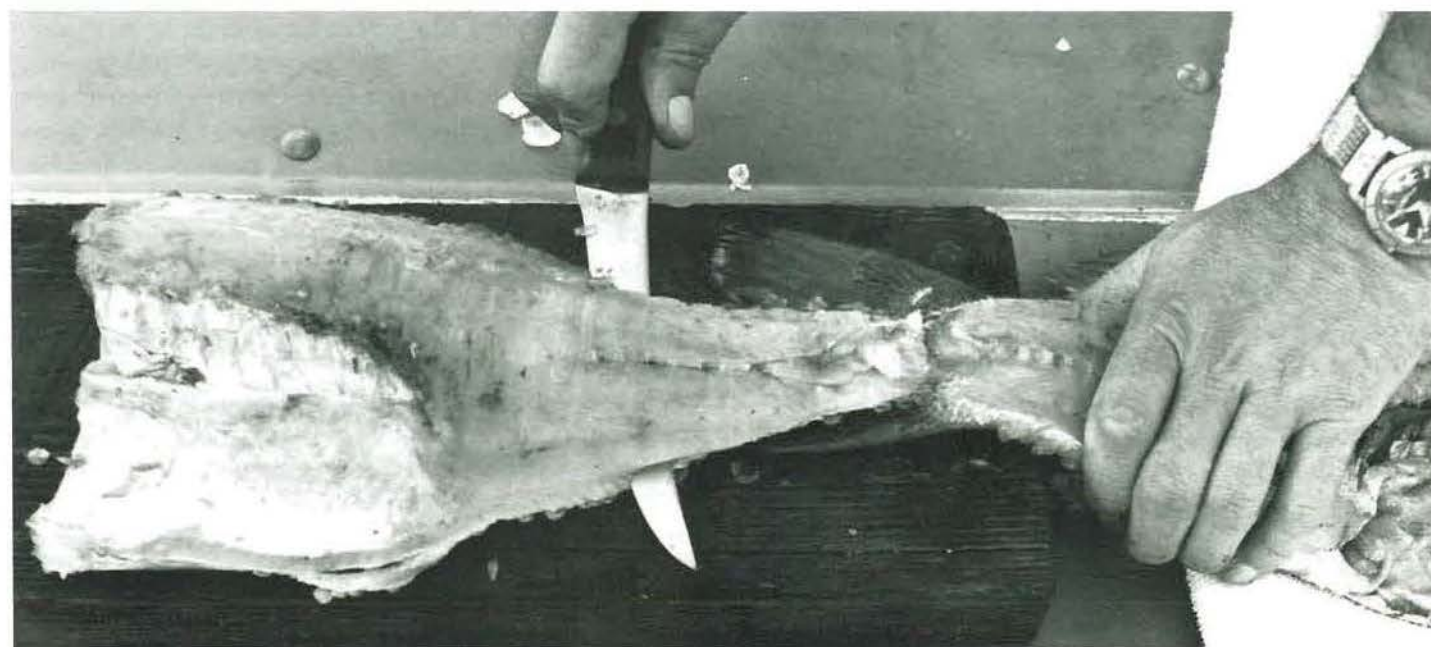




4



5



6

the blade held flat. The real trick is to stop your cut before you cut through the skin at the tail, just where the knife is stopped in picture 3.

As you know if you've ever cleaned a fish, they're slippery. After you've cut to the tail, but not through the skin, flip the filet over as in picture 4. Insert the knife in a flat position next to the skin and then cut back towards the wide part of the filet to remove the skin.

If you do it correctly, picture 5 shows the resulting white, even filet, with no skin and few bones. Then you turn the bass over, as illustrated in photo 6. The skin gives you something to hold on to as you work the knife down the backbone. Still holding the skin left from the first filet, you now make the last cut, with the cutting edge running next to the skin. It takes a little practice to work down the skin and save all the meat, but you'll soon learn how.

After the second filet is cut off, all of the parts you normally dispose of—head, scales, skin and insides—are in one piece for easily putting in a plastic bag for your garbage can.

If the filets are a little large for your frying pan, you may wish to cut each into two or three pieces. One of the best ways to deep fry them is to cut them into small strips about the size of large French-fried potato slices.

My own favorite way is to broil each side, with a strip of bacon on it, about 3 minutes. I place the filets about 4 inches below the heat. After cooking, I quickly add a wisp of pepper, a dash of salt, and a tad of fresh lemon juice. Bass, as well as any fish, is better when served piping hot. ●

PHOTO STORY BY CHARLES DICKEY



American Wildlife Management in Perspective

The Need for Management

WRITERS AND PHOTOGRAPHERS HAVE KNOWN for a long time that the plight of a wild animal struggling for survival makes a good story. Today, TV and illustrated magazines bring the problems of endangered species—sometimes with calculated shock effect—into the American home.

Much of this publicity has been constructive. It has aroused needed public support for efforts to save animals threatened with extinction at home and around the globe. Congress, as a result, has approved progressively stronger programs to aid wildlife species in difficulty. And the United States has taken leadership in developing a world treaty that commits all nations signing it to protect threatened and endangered animal populations.

As with all emotion-tinged issues, however, there is tendency to overstate the case. Some journalists distort the status of American wildlife in general, the steps needed to maintain wild populations, and the actions required to reverse declines of species that really are threatened. Because of such mis-

information many interested persons get the impression that *all* American wildlife is endangered. This view is unsupported by facts.

That man and his works have destroyed a number of species and greatly reduced others that were abundant in early times is well-known. Less well-known is the fact that many species, some of which were rare in colonial times, are thriving today largely because of compatible human influences on the environment, well designed private management efforts, and sound state and federal wildlife management programs.

All wildlife is affected in one way or another by man. But man can build as well as destroy. Of all of the creatures on earth, he is the only one with the ability to tailor the abundance of most species to fit his desires. With some birds and mammals this can be done with minimum effort because human changes in the environment favor their increase or their needs are not as critical. With others deliberate and often expensive programs must be developed to maintain specific habitats.

Actions needed to save one species may be entirely different from those needed to save a second. But all wild animals require adequate habitat to sustain their populations and breeding stock from one year to the next.

Habitat—The Vital Element

Food, water, and cover used to escape enemies and adverse weather are the essential parts of the habitat of every species. But the specific habitat needs of each species vary in some degree from those of every other kind of animal, although many different animals may occupy the same general area.

The water requirements of a desert jackrabbit obviously differ greatly from those of a beaver. What might be year-round food and cover for a meadow mouse would be little more than a full day's meal and no cover at all for an elk. Many migratory birds occupy and need widely different types of seasonal habitats separated by hundreds and often many thousands of miles. Some large mammals, like caribou and cougars, range over wide areas to find their year-round needs. Small animals, like shrews and moles, may live out their lives in one small corner of a field or woodlot.

Some species need a highly specialized type of habitat. Most woodpeckers require dead and dying trees to supply their insect foods and nesting sites. But the Gila woodpecker of the desert Southwest digs its nesting holes exclusively in the larger cacti.

Some species, like the California condor, can stand almost no human disturbance. Others, like the common pigeon and English or house sparrow, thrive in the most populous cities, nesting on buildings and garnering meals from human handouts and leftovers.

When the habitat needs of every species and

subspecies are computed in detail, the range in variety is almost infinite.

Whenever local conditions change, the species composition of the local wildlife populations also changes. Some species may be eliminated, others decline, and still others increase. If changes remove any of its essential habitat requirements, a species cannot continue to live in the area affected. If habitat of the kind it needs is reduced to remnants, the species will become endangered. If it is eliminated everywhere, the animals will become extinct. In the absence of adequate habitat, protection of individual animals is meaningless in terms of perpetuating wild populations.

Wildlife now threatened and endangered can be maintained only by protecting those populations that still exist and preserving what remains of their vital habitats. But their numbers can be increased by expanding and improving suitable habitats.

This does not mean that threatened and endangered wildlife can be saved only by denying or limiting human use of the land. Rather, it means that such use be done with thoughtful planning and with full consideration for wildlife's needs. Incorporation of such considerations in all programs affecting the landscape would assure a future for America's varied wildlife.

Habitat-Population Relationships

The potential for increase in wildlife populations in ideal habitat almost defies belief. In 1900, there were virtually no wild deer left in Pennsylvania. The state's original deer herd had been destroyed early in the 19th century by landclearing for agriculture, overgrazing, by destructive timber cutting followed by wild fire, and by unregulated shooting. After the Civil War, with increased industrial-

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ILLUSTRATIONS BY OSCAR WARBACH

This is Part 1 of a 2-part reprint of a bulletin, **PLACING AMERICAN WILDLIFE MANAGEMENT IN PERSPECTIVE**, prepared by the Wildlife Management Institute. Copies of the bulletin are available at 25¢ each from the Institute, at 709 Wire Building, Washington, D. C. 20005.





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ization and the opening of the West, thousands of farmers abandoned their marginal lands to move to towns, gold fields, or fertile soils beyond the Mississippi. Behind them, the forests, under protection from wild fire, gradually began to reoccupy abandoned fields and homesites, creating the early-growth forests favored by deer.

Around the turn of the century, sportmen's organizations and the Pennsylvania Game Commission purchased a relatively few deer from other states and from private dealers, had laws passed to protect them, and released them into habitat that changing land use had made ideal for deer. Twenty-five years later, Penn's Woods held nearly a million whitetails, almost twice as many as the available range could support through winter.

Potentially, a deer population can more than double every second year. One doe can produce 15 or more fawns in an average life span of eight years. If all her young and theirs survive to the same age and breed as successfully, they would number 150 or more before her death. Many animals—songbirds, rabbits, squirrels, quail and ducks, for example—can increase at even greater rates.

Obviously, when a population of a particular species begins to multiply, something has to give—and it does. Each piece of land has a limit on the number of animals of any one species that it can support. Wildlife biologists call this carrying capacity. It is the capability of an area to provide a species' food, water, shelter, and other needs in a given season. Once carrying capacity is reached, the surplus animals must move elsewhere or die.

If suitable under-stocked habitat is not available within their range of mobility, the surplus animals are doomed.

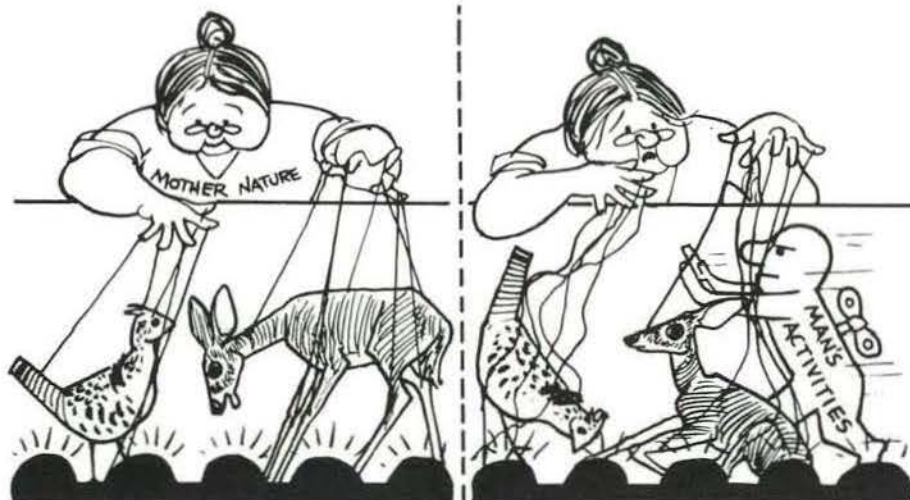
The tendency of populations of nearly all wild species is to expand rapidly to the carrying capacity of the available habitat. In some species, like pheasants and rabbits, which often produce ten or more young in a single breeding season, this level can be attained very quickly, even by a reduced breeding population. In other species, such as bears, which rarely breed until they are several years of age and then produce fewer young, the rate of increase is slower. But nature compensates by endowing the slower reproducers with longer lives.

For many species, particularly the smaller animals, nature's scheme is to produce an overabundance of young. This increases the likelihood that some will survive to perpetuate the species in spite of the inevitable toll taken by adverse weather, disease, starvation, predators, and other hazards. Most wild animals in North America produce all of their young during a restricted season of a few weeks, usually in the spring or early summer. In northern or temperate areas, summer carrying capacity is far higher than that of winter because of the abundance of plant and other life. A relatively small patch of cover may contain a population of a dozen or more cottontail rabbits in early September, but few are likely to survive until March. No more than 35 percent of the young mourning doves produced in summer live until the next breeding season. The higher the reproductive rate of a species, the higher its natural mortality rate. In the wild, animals that produce many young have short lives and lose most of their young in their first year.

Nature has many methods for regulating wild populations. One of these is *territorialism*—the tendency of breeding animals to defend a given area. Some sea birds nest almost shoulder to shoulder in dense colonies, but they will not tolerate the presence of other birds within reach of their nests. The lilting song of a male house wren is not a song of joy, but a warning to all other wrens to keep away from his nesting territory. If an intruder ventures too near, the defending male will attack with righteous fury. A cock pheasant may gather a harem of six or more mates and defend a crowing area approaching an acre or more. A male grizzly bear, in breeding season, may defend 20 or more square miles from all other males of his kind.

Such natural population controls are nature's way of assuring that only the stronger, quicker, and more alert animals of each species survive until breeding season and perpetuate the species.

At times, a series of mild winters and unusually favorable conditions over several breeding seasons may temporarily raise the normal carrying capacity



MAN AND HIS ACTIVITIES HAVE INTERRUPTED WILDLIFE'S NATURAL CYCLES AND SYSTEMS.

and the populations of animals that depend on plants. When weather conditions return to average, crowding leads to stress and competition for food, space, and mates and permits the spread of diseases. Winter food supplies become inadequate and malnutrition, diseases, and predators take heavy tolls. In turn, populations of wolves and other predators that feed on the plant eaters are regulated by the abundance or scarcity of the animals on which they feed.

Overpopulations can be especially disastrous to large browsing and grazing mammals, like deer and elk. Where overabundant, such animals can cause great damage to their own habitats, resulting in a much reduced carrying capacity for many years. That is what happened to the Pennsylvania deer herd in the late 1920's. Hundreds of thousands of deer died of starvation and disease in a series of bitter winters before the numbers could be lowered by regulated hunting to the carrying capacity of the winter range.

Even in some wildlife refuges and national parks,

elk and deer herds must be thinned to prevent overabundant animals from destroying their food supplies and damaging the food supplies of other species. The lesson here is that man and his activities have so interrupted wildlife's natural cycles and systems in most places that only through deliberate management can mankind assure the survival of most species of wildlife.

The Role of Protection

Protection plays an important part in wildlife management. The best habitats are of no value to wildlife if there are no breeders to occupy them. But to argue that total protection is the answer for all wildlife problems is a dangerous oversimplification. It ignores the differing needs of the various species.

With the exception of a few species considered pests in certain situations, nearly all birds and mammals receive some degree of legal protection. Songbirds, eagles, hawks, egrets, and many other types of birds are granted continuing protection under state and federal laws. Most states provide full legal protection for endangered species found within their borders. At the federal level, the endangered species programs and the new world treaty governing trade in threatened and endangered species provide additional protection for our less common forms of wildlife. Violators of these laws risk heavy penalties in state and federal courts.

But the degree of protection needed by the different species varies as widely as their habitat requirements. The loss of only a few individuals of an endangered species like the whooping crane or California condor would be critical. On the other hand, the coyote, in spite of persecution since early times, thrives in the face of adversity. It remains common on most of the western prairies and has extended its original range into the South and East.

Animals classed as game under state and federal laws may be hunted, but they are not without protection. They may be taken by hunters only under regulations that prescribe calendar dates, hunting

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hours, bag limits, and methods of taking. Under certain circumstances, hunting seasons for some game species may be closed completely. All game species are protected by law while they are nesting and raising their young. These regulations, based on careful research, are designed to assure the carry-over to the next breeding season of enough animals to repopulate the available habitat.

There are situations in which it may be necessary to reduce temporarily the population of one species to benefit another. Although gulls are protected by state and federal laws, legal protection of herring gulls nesting on islands off the Massachusetts coast was suspended for a while to permit the poisoning of some destroying the eggs of others. The reason—the breeding gull population had mushroomed because of the presence of nearby mainland garbage dumps, and the abundant gulls were eating the eggs and young of the much rarer terns that formerly had the islands nearly to themselves.

In order to reestablish a species in suitable unoccupied habitat, it may be necessary to temporarily reduce the numbers of predators in the area until the released animals multiply and become familiar with their new surroundings. After prey species increase above the threshold level, predators are just one of the many factors bearing on the population's survival.

Predation is not all bad, in fact. By falling victim to a fox or an owl, for example, the prey helps perpetuate a higher and equally valued order of life.

The Real Threat to Wildlife

Man rarely sets out deliberately to exterminate a wild species. Some, like the coyote and crow, that settlers marked for extermination, still thrive in spite of massive trapping and poisoning campaigns. But most of man's adverse influences on wildlife have been unintentional and inadvertent.

Man, his works, and his livestock compete with wild animals for food and space. Actually, the effects of habitat destruction are worse than direct killing, because unoccupied wildlife habitat can and, in time, usually will be reoccupied. Habitat that is drastically altered or destroyed can never support its original wild populations.

Housing developments, highways and airports, hydroelectric and irrigation reservoirs, factories, and mines contribute to the American standard of living. But each new residential or industrial expansion reduces the habitat base upon which many wildlife populations depend.

Even some practices associated with farming and forestry can adversely affect wild populations. Large mechanized farms devoted to single crops, like wheat, and extensive, closely planted pine plantations provide few of the needs of wildlife. Sanitation cuttings that remove all hollow, dead and dying trees and sprawling nut- and mast-producing



hardwoods eliminate the dens, nest sites, and food of many forest species.

Draining and filling marshes, potholes, and other wetlands to expand croplands, commercial and industrial complexes, and transportation systems pose major threats to waterfowl and other wildlife. Coastal marshes, favorite sites for factories, refineries, and airports, are among the most productive types of habitats for a wide range of fish and aquatic wildlife. Channelization can destroy the habitat of animals frequenting rivers and streams.

Livestock grazing can improve conditions for some wildlife, but overgrazing can exclude most wildlife use, often for many years. Large-scale brush clearing to favor grasses can eliminate food and cover needed by many birds and mammals.

Modern technology has produced a broad range of pollutants with which wildlife must contend. Some, like certain pesticides and mercury, kill directly. Others, like DDT, operate more subtly on the animals' reproductive systems, cause egg-shell thinning in some birds, and depress hatching success in others. Acid mine wastes and industrial pollutants destroy vegetation essential to the survival of many species.

These and many other critical environmental problems concern the wildlife manager. Often his recommendations, if applied, can have a major influence on the continued survival of one or more species in a given area and help maintain nature's functioning systems.

Only through careful guidance of all human activities that affect wildlife, both indirectly and directly, can their populations be assured. ●

Peek at the Peeps

for close shots at moving game—and for target shooting—a rear peep with a suitable front sight is hard to beat for effectiveness

HUNTING



By EDMUND McLAURIN

ANY EXPERIENCED HUNTER WHO PERUSES the current catalogs of leading gun sight manufacturers is sure to note the dearth of good metallic sights for sporting rifles. The trend has been growing during recent years.

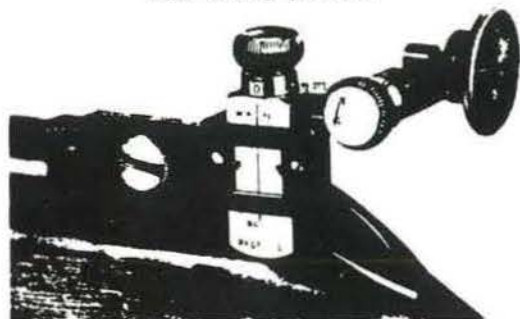
Lyman and Redfield, two long-time major producers, for example, have reduced their metallic sight listings markedly, especially so in receiver peep models.

The Lyman Gun Sight Company still makes its famous micrometer-click Model 48 receiver peep sight, as well as the less expensive Series 57 and 66 receiver peeps. The long-popular models 58, 40, 524, 45, 53, 55, and the close-to-the-eye tang versions that made the Lyman name and trademark famous, are gone.

Redfield no longer produces the Redfield Model 70 receiver peep or its alloy-metal Trophy model. Also gone is the Redfield "Sourdough" blade front sight, one of the best hunting sights ever produced.



Micrometer peep rear and aperture front sight, the best metallic sight combination for strictly competitive target shooting against well-lighted backgrounds. Try using the size .110 insert for the standard 50 and 100 yard targets, combined with the rear sight aperture of .060, when shooting prone or from sitting position.



However, both Lyman and Redfield still make precision micrometer-click peep sights for target rifles designed for formal American and International Match competition. Sight production at the Lyman and Redfield factories now centers largely on scope sights.

Only Williams Gun Sight Company, 7389 Lapeer Rd., Davison, Michigan 48423, and Marble Arms Company, 420 Industrial Park, Gladstone, Michigan 49837, still catalog a good variety of metallic sights. Williams continues to produce its well-known "Foolproof" series of receiver peep sights, as well as the less expensive 5-D series, along with a wide variety of open sights.

The Marble firm, a primary manufacturer of open sight combinations, still produces genuine ivory bead front sights in huge quantities, getting some 120,000 finished sights from a 90-pound elephant tusk. An ivory front sight shows up well against most backgrounds even under some pretty unfavorable light conditions, but the bead breaks rather easily. Some of the plastic versions are far more practical.

Seemingly, there is no shortage of good metallic sights for handguns. The Micro Sight Company, 242 Harbor Blvd., Belmont, California 94002; the Bo-Mar Mfg. Company, Box 168, Carthage, Texas 75633, and the Merit Sight Company, P.O. Box 995, Sequim, Washington 98382, manufacture metallic sight combinations to fit a long list of popular handguns. I can recommend the wares of the three firms with confidence, for much of my yesteryear award-winning shooting was done with handguns equipped with sights chosen from their offerings.

Some sight facts are beyond argument. Optically, a micrometer-click rear peep sight close to your aiming eye is superior to an open rear sight, and a good scope sight, properly focused, tops in optical performance the receiver peep.

Let's examine closer some details regarding the use of various types of sights.

In using an open rear sight in combination with a blade or bead front sight, the aiming eye is called upon to focus on three different points at the same time: the rear sight, the front sight, and the target. The human eye, great though its adaptability, cannot adequately cope with this particular stunt. Instead the tendency is for the focus of the aiming

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eye to jump from point to point trying futilely to bring all three into sharp focus. Precise sight alignment suffers, the degree depending on the ability of the aiming eye to quickly change focus to the three different distances represented—say 15 inches to the open sight, 28 to 36 inches from the aiming eye to the front sight, and anywhere from 15 feet to 400 yards to the target.

With normal young eyes, the muscles controlling focusing show remarkable accommodation and flexibility, enabling the aiming eye to make split-second changes of focus from near to far, with reasonably good definition. Eyes of older shooters have more difficulty adapting to the situation with reasonably good definition.

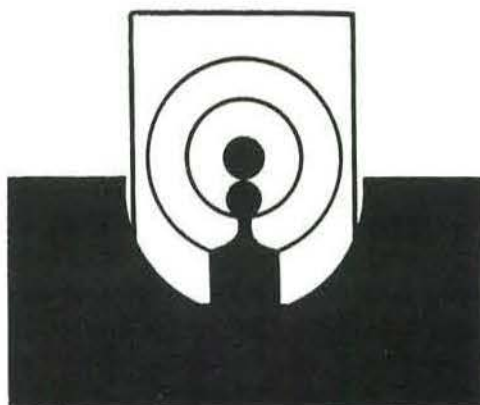
Yet, most of the center fire hunting rifles sold over sporting goods store counters come with relatively crude, open-style rear sights. Why?

There are several reasons. Open-style rear sights are rugged, and are easy and inexpensive to manufacture. When used carefully under average hunting conditions, they deliver all the accuracy the average hunter needs for taking large game at under 100 yards. This covers the range at which most such game is killed.

One must also consider that there are at least 200 different sighting combinations that can be put on hunting rifles; the manufacturer catering to the general trade cannot possibly match the specific preference of some unknown future purchaser.

But significantly, most stock model hunting rifles factory-fitted with open sights now also have the receiver drilled and tapped for a peep sight.

A peep rear sight gives better performance than an open type. Being so close to the shooter's eye that the inside rim of the aperture is naturally out of focus, the aiming eye makes no attempt to achieve the impossibility of bringing front and rear



Open rear sight and bead front sight correctly aligned on target. The Open U-style rear, always used with bead front—never with a blade, is really only half the peep sight's picture. Had the front sight in this illustration been a blade, the rear sight would have to be either a full peep, or a sharply defined V open sight. Good for rifles, but not handguns. For pistols, use a blade front sight and a square-U, Patridge rear.



Peep rear hunting sight and bead front on small game target at close range, using point-of-bullet impact hold. But at 100 yards, even a small 1/16" size bead will cover too much of such targets when using that sight picture. For hunting, it is better to sight-in so that the bullet will hit slightly above the point of aim, the target resting on, or being intersected by, the top of the front sight.

sight and the distant target into sharp focus at the same time. Instead it looks *through* the peep hole—the aiming eye being automatically and effortlessly attracted to the center of the aperture, where the light is the strongest—to focus on the front sight and the target.

Don't worry about "seeing too much country" through the peep hole. Keep in mind that a rear peep sight is much like a knothole in a ball park fence; the closer you get your eye to the hole, the more you see on the other side. And it is what you see on the other side that is important, not the peep hole itself.

For hunting, a 3/8- or even 1/4-inch overall diameter sighting disc with a .120-inch aperture is easy to see through. The trouble with most peep sights used for hunting is that sometimes the shooter will screw in a large target disc with a tiny .040- or .050-inch peep hole, thereby reducing the sight's usefulness, especially under poor light conditions. The unhappy individual then unfairly blames the peep, claiming he cannot see well through the peep hole and that moving targets, especially, are difficult to pick up with the front



Hooded aperture type front sight mounted on rifle. They come in a variety of sizes and with multiple inserts, giving the target shooter a choice of any desired sight combination. Most of the experts use only the aperture and blade inserts, discard the others.

sight. It is very easy to slip into the trap of using too small a peep hole and thereby unintentionally handicapping yourself.

Usually, I sight-in with the peep sight disc in place, then, once properly set, I remove the disc and utilize the large aperture built in the sight's housing, for hunting. In the field, it is easy for your eye to quickly find this large peep hole and pick up a moving target. Since the optical principle remains the same, there is no appreciable loss of practical hunting accuracy.

When installing a receiver peep sight, remove the factory open rear sight and fill the dove-tailed slot with either a metal blank or a folding-style auxiliary middle sight, such as a Lyman Model 16 or Marble folding leaf sight. Leaving the factory open rear sight on the rifle, or installing a folding-style auxiliary and keeping it in raised position, cancels out the advantages of the peep.

The folding middle sight should not be installed until after the new receiver peep sight has been precisely sighted-in. Then, the auxiliary sight is



Bead front sight mounted on a ramp. The ramp's inclined plane tends to lead the eye to the sight itself, and gives a smart appearance to a firearm.

driven into the rifle barrel dove-tailed slot until it is in alignment with the peep and the front sight. Once positioned, the folding middle sight is turned down out of the way to be used should you want to check alignment of your regular sights or in the unlikely event that the peep suffers damage while you're afield.

There is no mystery connected with adjusting a rear peep sight. Just follow the cardinal rule of moving the rear sight in the direction you want your shots to hit on the target. Many peep sights come with adjusting knobs marked to indicate which way to move to change the impact point. Any sight not so marked should be, once the correct directions of elevation and windage adjustments are established. Sight adjusting knobs can be easily marked for correct direction movements by neatly engraving them with an appropriate symbol. A Dremel tool or vibrating-type electric marker will accomplish the job in a couple of minutes.

Don't overlook the fact that installing a receiver peep sight may call for a different height of front sight. Consult sight catalog charts to find what sight combinations are especially made for your particular rifle.

For hunting, the style, shape, size, and visibility of the front sight are important considerations, for it is the front sight that constitutes the shooter's direct link with his target. How well defined the front sight is seen by the shooter's aiming eye, how it is aligned with rear sight and target, and its exact position at the moment of firing largely determine whether or not a shot is a hit or a miss.

A bold, black blade of medium thickness and height is hard to beat as an all-around front sight. The flat top of a boldly visible post permits precise sight alignment, with the hunter able to see his game targets above it and better follow movement. For long shots, without change in rear sight elevation, it is easier to accurately hold a post sight higher on target than when aiming with a bead-style front sight.

A post sight becomes a liability if the shooter has uncorrected astigmatic error in vertical areas of the image he sees. The condition is correctable by the wearing of proper prescription glasses. For a shooter, correction for as little as $\frac{1}{4}$ diopter of astigmatic error is important.

Also, a shooter past 40, with gradually increasing hyperopia, or farsightedness, will often have trouble seeing his rifle's front sight sharply, although distant targets generally appear in sharp definition. Correction calls for a convex, or plus, eyeglass lens or a change to an optically adjustable, single-sighting-plane scope sight.

The peep rear sight and medium-wide blade front sight with a "six o'clock" point of aim and with sights adjusted so that bullets will strike the center of the bullseye, is one of the best available metallic sight combinations. You simply look through the rear sight's peep aperture, letting it blur all it wants to around the rim and concentrating on centering the top of the front sight in the peep hole, the aiming eye as close to the rear aperture as you can get it.



The ideal all-around magnification is 4X, but for brush hunting, as in Florida, a $2\frac{1}{2}$ or 3X will prove superior, especially on running game. Always use the lowest power that will do the intended job. ●



Gator Aid

WILDLIFE OFFICER ALAN ZELL finally met an alligator with chutzpah, reports Commission I-E Officer Bob Burleson. The 7-foot, 9-inch gator, doing a nifty two-step across one of Miami's busier intersections, had been temporarily detained by Florida Highway Patrolman E. C. "Clyde Beatty" Barnett.

When Officer Zell arrived at the scene, the ravenous reptile, which by then was doing time in the trooper's trunk, was somewhat tempered by the ropes around his body and snout. But he wasn't about to become another Martha Mitchell.

Indeed, when the daring duo went to release El Gatorissimo in a less populated section of the Everglades, the blackguard was in no mood for a tango and promptly latched onto Officer Zell's left leg—after sideswiping Trooper Barnett on the way out of the trunk.

Barnett managed to free Zell from the gator's grip, and rushed him to the hospital, where Zell was admitted for treatment and observation. Barnett was treated for minor cuts and released. The gator pled no-fault in the whole episode, but offered no further resistance.

Said Officer Zell about his alligator encounter, "We've got to

CONSERVATION SCENE

stop meeting like this!" He then launched into a homemade version of the old song, *Dry Bones*: "... leg bone connected to the knee bone, knee bone connected to the thigh bone, thigh bone connected to the alligator."

Officer Zell enjoys his work.

First Cruickshank Award

A HIGHLIGHT OF THE Florida Audubon Society's 75th Anniversary Convention in late January was the presentation to G&FWFC biologist Steve Fickett, Brooksville, of the Society's first Allan Cruickshank Memorial Award. The presentation recognized Fickett's dedication to the Society's goals and to Florida conservation in general. His participation has extended over a wide range of activities, from leading Audubon field trips to ramrodding establishment of the Chinsegut Nature Center in central Florida.

The award is especially valued by Fickett since he was a long-time personal friend of artist-naturalist-conservationist Allan Cruickshank, who died in 1974. Recalling his first contact with the conservation great, Fickett remembers that as a teenager at an Audubon field camp in Maine, he was the butt of many of Cruickshank's jokes. It was a sort of initiation rite for Fickett, for he and Cruickshank became great friends then, and remained so over the years. Fickett's recognition was acclaimed by the membership, which gave the dedicated Commission biologist an enthusiastic standing ovation.

Park Camping

NOW AVAILABLE is the 1975 edition of *CAMPING IN THE NATIONAL PARK SYSTEM*. Director Gary Everhardt of the National Park Service announced that the

pocket-sized booklet describes camping facilities in 96 areas of the national park system.

In addition to describing the services and facilities offered at more than 400 campgrounds across the nation, the new guide has information on fees, regulations, and safety concerns which should be brought to the attention of every park visitor.

The publication is available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402, for 65¢, under stock number 024-005-00573. Payment, by check or money order payable to the Superintendent of Documents, should accompany each order.

Buzzard Watchers

THE ANNUAL RETURN OF THE SWALLOWS to the old Spanish mission San Juan Capistrano in California is one of those perennial favorites of the news media. Up in Hinckley, Ohio, near Cleveland, a somewhat less lovely harbinger of spring is honored yearly with local festivities. The turkey buzzards (vultures, if you are a stickler for more scientifically acceptable details), for as long as residents can remember have returned to the Hinckley area on March 15 from their winter sojourn to the south.

No one made much of a fuss of it until newspapers noted the event in 1957. That bit of notoriety drew some 9,000 buzzard watchers, and provided a marvelous excuse for an annual party. Now it has gone so far that the shoulder patch of the town's police uniform has been redesigned to depict three soaring buzzards set against a rising sun. A local school teacher has even turned out a musical com-

position called "The Buzzard Bump." Who can doubt that not long in forthcoming will be a lovely romantic ballad, "When The Buzzards Return To Hinckley."

Officer Dies

RETIRED ON OCTOBER 17, 1974, because of failing health, long-time wildlife officer Euzeal Worley Pappy passed away less than a month later, on November 15, 1974. Pappy began his career as a wildlife officer on September 1, 1947 and was on the job for more than 27 years.

He was born at Sampson, St. Johns County, in 1912, and lived in the area all his life. His father was an old-time market hunter

in the St. Johns country, and was well-known as a dog trainer and hunting guide. Euzeal was the youngest of several sons. Growing up in a family of outdoorsmen, he came naturally by his intense interest in Florida outdoors. Accomplished in many outdoor skills, he was especially noted as a turkey hunter.

Typical of many of Florida's dedicated wildlife officers, he went about his job in a quietly efficient manner. His contribution to Florida wildlife conservation was an important one.

Reward Announced

THE NATIONAL WILDLIFE FEDERATION has announced that it will pay a \$500 reward to a

Tennessee duck hunting guide for supplying information that led to the conviction of a Memphis physician for killing a southern bald eagle.

The reward will go to the Union City man who saw a hunter shoot down an eagle from a duck blind at Reelfoot Lake, Tennessee. The description of the hunter, his companions, and a pickup truck in which they left the scene was provided Fish and Wildlife Service agents and resulted in the arrest three weeks after the incident. The hunter pleaded guilty before U. S. District Judge Bailey Brown to a charge of killing the eagle, an endangered and protected species, and was fined \$1,000.

DIAL FREE

FLORIDA WILDLIFE OFFICERS are generally found in the most unexpected places. This is the name of the wildlife law enforcement game. While this surprise approach has proven successful in deterring game law violations, it has also proven to be an obstacle when conservation-minded citizens needed to get in touch with the local Game and Fresh Water Fish Commission representative.

Commission Director, Dr. O. E. Frye, says, "We hope we have overcome this particular communication obstacle with the implementation of five toll-free telephone dispatch centers which will allow citizens to pick up a telephone and relay vital information to the wildlife officers on wilderness patrol without having to pay long distance charges."

"We have installed a toll-free telephone at each of the Commission's five regional offices," Frye continues, and each telephone will be answered on a 24-hour-a-day basis by the station radio dispatcher. The dispatcher will relay information to wildlife officers on duty."

The toll-free telephones are as follows:

Northwest Region Panama City . . 1-800-342-1676
Northeast Region Lake City . . . 1-800-342-8105
Central Region . . Ocala 1-800-342-9620
South Region . . Lakeland 1-800-282-8002
Everglades Region W. Palm Bch. 1-800-432-2046

In discussing the toll-free telephone reporting system, Frye commented, "The units were installed in a continuing effort to improve the communication between the Commission and the citizens of Florida. We hope our citizens will use the service to report violations of wildlife laws and to register

complaints or pass on information that will help us guard our outdoor and wildlife heritage."

"We have made some tremendous steps in our communication network due to legislative support which provided the means for the current 24-hour-a-day statewide radio dispatch operation. The radio dispatch operation provided communication for our officers and the toll-free telephone will make the Commission available to citizens. The toll-free telephone numbers will be listed in the new telephone directories for the cities located within that particular region," Frye added.

Lt. Colonel Robert Brantly, Commission deputy director, pointed out that the telephone service was not designed to serve as an information center, and most of the telephone-radio dispatchers are trained to receive and relay information rather than provide information that may relate to hunting and fishing.

Sportsmen seeking information about hunting, fishing, wildlife laws, bag limits, seasons and regulations should use the Commission's regular telephones which are operated during office hours at the following:

DeFuniak Springs	904-892-3117
Panama City	904-785-5352
Tallahassee	904-488-1960
Lake City	904-752-0353
Gainesville	904-376-6481
Ocala	904-629-8162
Orlando	305-295-9123
Eustis	904-357-6631
Lakeland	813-686-8157
West Palm Beach	305-683-0748
Ft. Lauderdale	305-524-3125
Vero Beach	305-562-3924
Miami	305-661-7426

The Quota Permit System

JUST AS THE EARLY BIRD is said to get the worm, the sportsman who acts promptly stands the best chance of hunting on his favorite wildlife management area during the opening 9 days of the general 1975-76 hunting season.

Dr. O. E. Frye, Jr., director of the Game and Fresh Water Fish Commission, says the sooner an application for a quota permit is in, the better the chance a hunter has of being selected to fill the quota on a particular area.

The quota permit system for the management areas, new for 1975, will limit the number of hunters allowed to hunt on a wildlife management area only during the first 9 days of the season.

From November 8 through 16, a sportsman must have the quota permit along with his regular hunting license and management area stamp. The quota permits are going to be issued on a first-come, first-served basis—not by a drawing.

Plans are for the permit application forms to be available on Monday, June 2, from county tax collectors' offices and license agents, the same day the wildlife management area permit stamps go on sale. The stamp number and the hunter's signature must be on the quota permit application for it to be accepted.

Hunters who miss their first choice will automatically be in line for their second and third choices, and are advised to list more than one management area on the application.

Frye emphasized that only official application forms sent to Tallahassee through the mail will be accepted. "We cannot accept hand-delivered applications," he stressed, "and any duplication in applications will result in rejection of the applicant."

Complete instructions for filing an application (and receiving an acknowledgment, if desired) are printed on each form.

A Resident Senior Citizen Hunting and Fishing Certificate is required for hunters 65 years of age and over who apply for the special wildlife management area quota permit. The new, numbered Senior Citizen Certificate, a wallet card, will be available free from county tax collectors and their license agents on Monday, June 2, the same day applications for the quota permit may be obtained.

The new quota hunt plan is designed to relieve the opening few days' crush on certain popular wildlife management areas. It should improve the quality of the hunt and relieve undue pressure on the available game supply. The Commission recognizes that some quotas may prove, after one or two years experience, to require revision either upward or downward. This will be done as hunt-

ing pressure and hunter success reports reflect such need.

The following management area quotas are for the first 9 days (Nov. 8-16, 1975) of the general hunting season, unless otherwise specified.

Apalachee	200
Apalachicola	8000
Aucilla	3500
Avon Park	2000
Blackwater	2900
Brown's Farm	750
Bull Creek (Nov. 8-9)	300
Bull Creek (Nov. 10-12)	300
Bull Creek (Nov. 13-16)	300
Camp Blanding (Nov. 8-9)	1000
Camp Blanding (Nov. 10-12)	1000
Camp Blanding (Nov. 13-16)	1000
Cecil M. Webb*	500
Croom	400
Cypress Creek	250
Edward Ball	1200
Everglades	5000
Farnton	1000
Fort McCoy	600
Gaskin	1700
Green Swamp (Nov. 8-9)	750
Green Swamp (Nov. 10-12)	750
Green Swamp (Nov. 13-16)	750
Guana River	250
Gulf Hammock	3000
G. U. Parker	400
Hudson	270
J. W. Corbett	2055
La Floresta Perdida	500
Lake Butler	2000
Lochloosa	700
Lykes Bros. Fisheating Creek	800
Nassau	2000
Ocala	7000
Osceola	4000
Point Washington	2500
Richloam	1100
Robert Brent	1600
St. Regis	400
Steinhatchee	6000
Tide Swamp	600
Three Lakes (Nov. 8-9)	600
Three Lakes (Nov. 10-12)	600
Three Lakes (Nov. 13-16)	600
Tomoka	2325

Special Hunts

Citrus Gun Hunt 1	(Dec. 13, 14)	1200
Citrus Gun Hunt 2	(Dec. 20, 21)	1200
Citrus Primitive Weapons	(Dec. 6-8)	1200
Green Swamp Hog Hunt	(Jan. 10-11)	250
Green Swamp Hog Hunt	(Jan. 17-18)	250

* The quota on Cecil M. Webb WMA does not include quail hunters.



**ELIGIBILITY REQUIREMENTS
SPECIES**

LARGEMOUTH BASS

.....8 pounds or larger

STRIPED BASS

.....10 pounds or larger

CHAIN PICKEREL

.....4 pounds or larger

BLUEGILL (BREAM)

.....1 1/2 pounds or larger

SHELLCRACKER

.....2 pounds or larger

BLACK CRAPPIE

.....2 pounds or larger

REDBREAST

.....1 pound or larger

TO BE ELIGIBLE . . .

all fish must have been taken from the fresh waters of the State of Florida, on conventional tackle, with live or artificial bait, in the presence of at least one witness. The catch must have been weighed and recorded at a fishing camp, tackle shop, or similar establishment, by the owner, manager, or an authorized employee. No citation will be issued for a record-sized catch unless fish was preserved for examination.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge to subscribers to FLORIDA WILDLIFE Magazine and their immediate families who catch any of the listed freshwater fish of the prescribed minimum size. A citation for framing will be mailed to the applicant upon receipt of the following application form properly filled out and signed. Only those applications received within 90 days of the date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date _____
Game & Fresh Water Fish Commission, Tallahassee, Fla. 32304

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print) _____

Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

Where Caught _____ in _____ County

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



Flicker with Young

Photo By Leonard Lee Rue III

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